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for the year 1854,

By M. C. GRITZNER.

Published with the Approbation of the Patent Office.

ARTS AND MANUFACTURES.

VOL. 2, __ Plates.

Washington, 1855.

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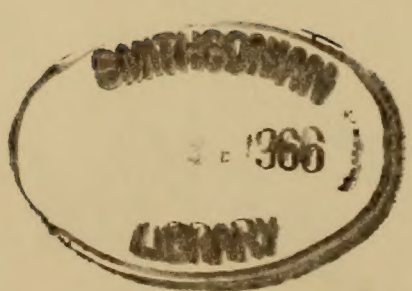

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This volume of Engravings is presented to the public as a useful and necessary auxiliary to the United States Patent Office Report. The designs are taken from the original drawings and models of the inventors, and they are numbered to correspond with the letter press, and can be readily referred to in the volume. It is the first volume of the kind that has ever been published, and as an evidence of its intrinsic value, the following letter is given from the Hon. Judge Mason, the Commissioner of Patents:

U. S. PATENT OFFICE,

Washington, June 4th, 1855.

Sir:

I have the pleasure of acknowledging the receipt of a very beautiful volume containing copper-plate illustrations of the patents issued from this office for the year 1854. It reflects the highest credit upon yourself and others who were engaged in the work, and greatly increases the regret I feel at my inability to carry out the plan of sending out the illustrations of the late and all succeeding reports in a style similar to that represented in this volume.

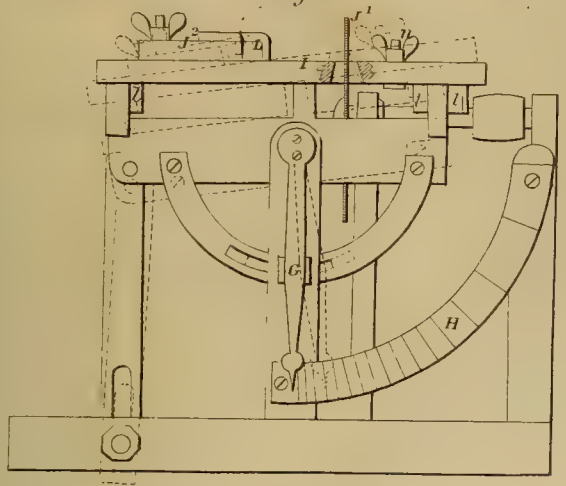
Accept my thanks for the very welcome present.

Yours respectfully,

CHARLES MASON.

H. C. SMITH, Esq.

10358 Fig. 1.



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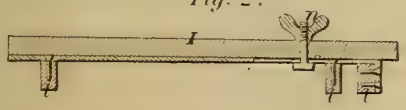

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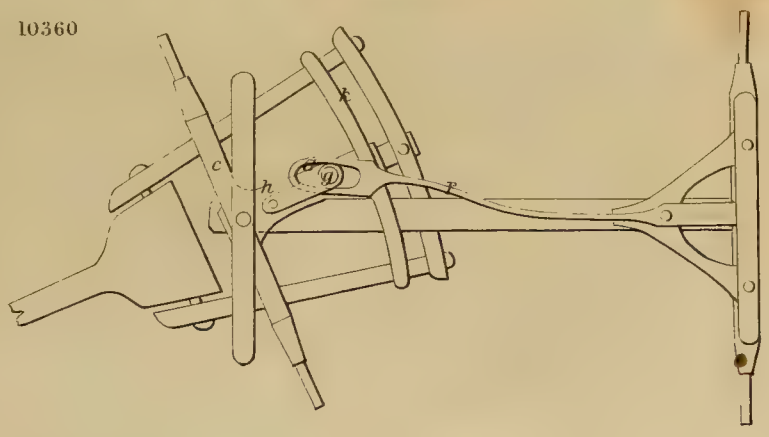

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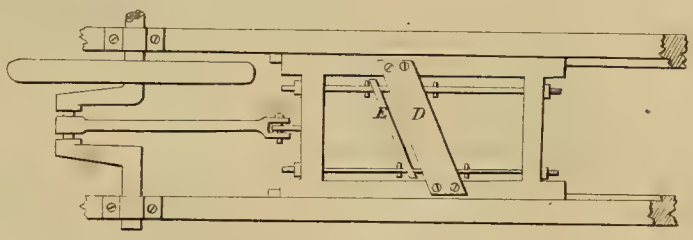

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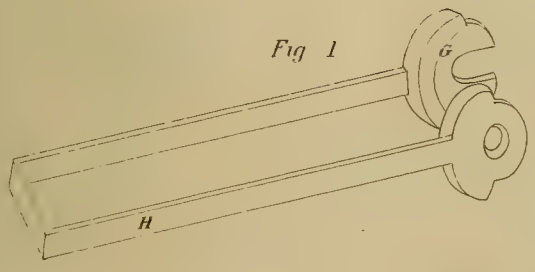

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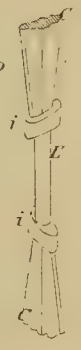

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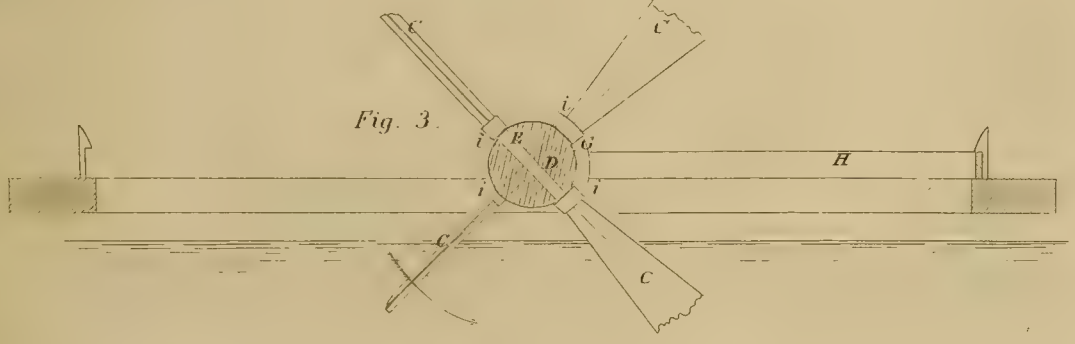

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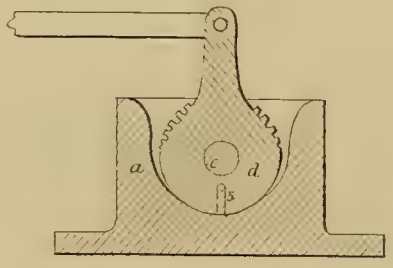

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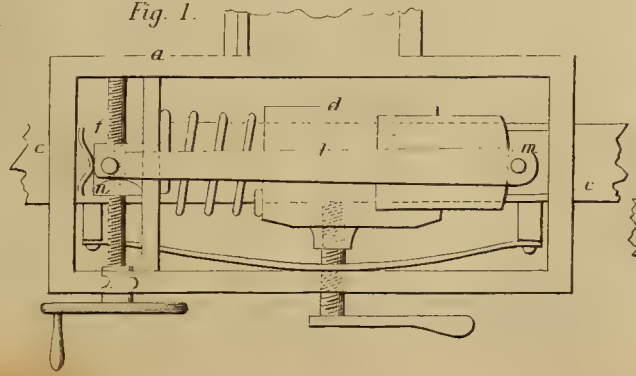

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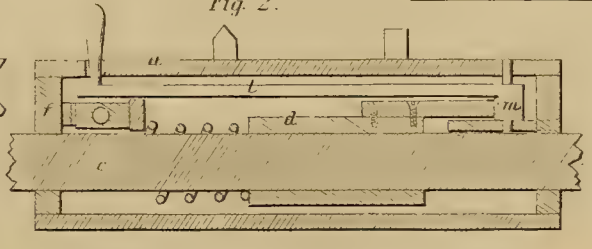

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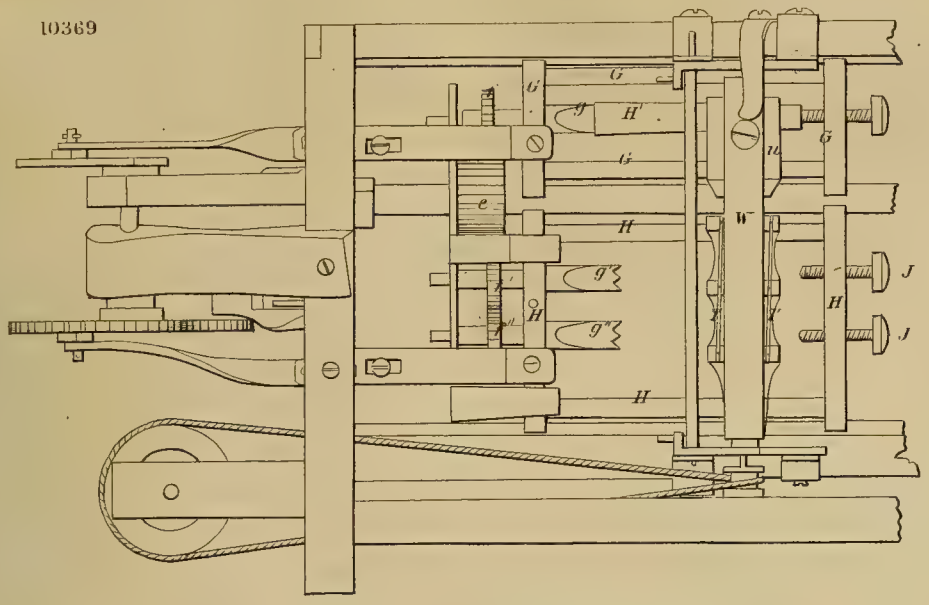

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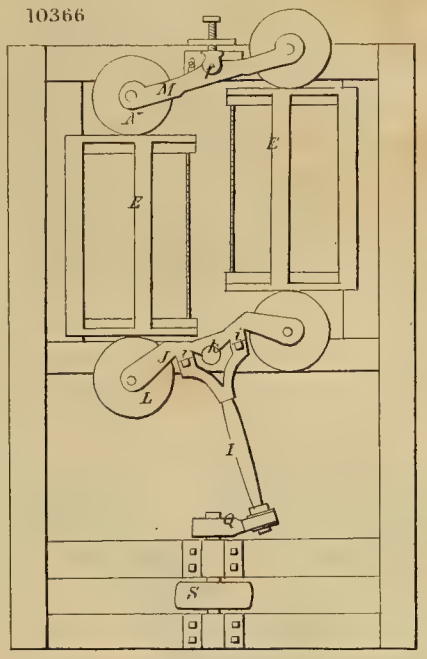

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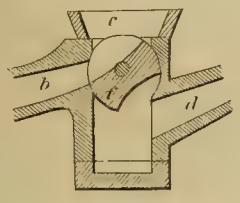

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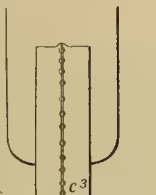

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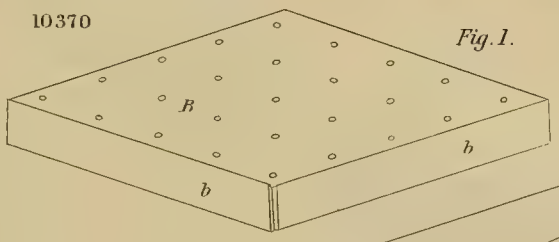

Fig. 2.

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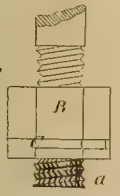

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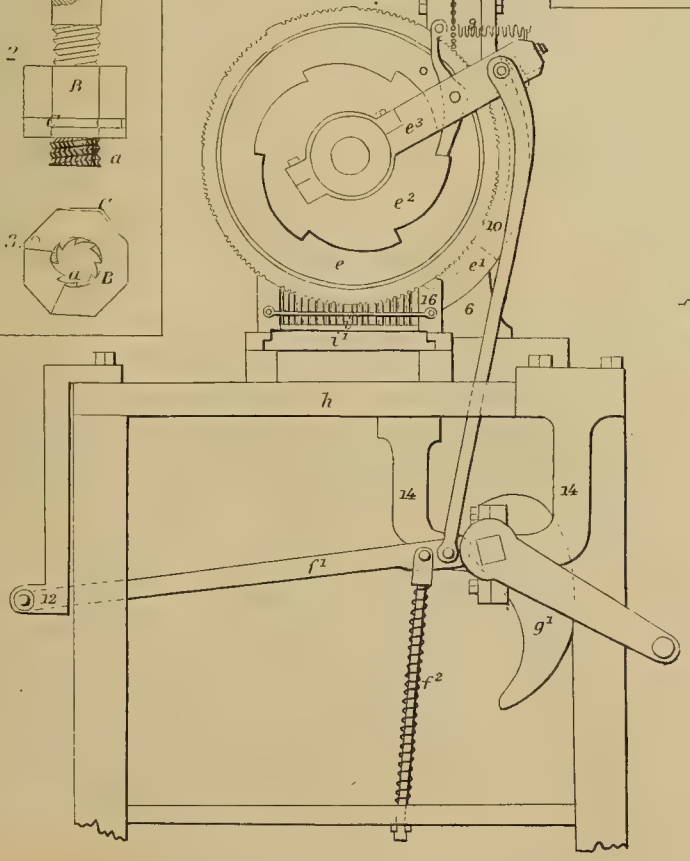

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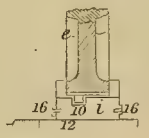

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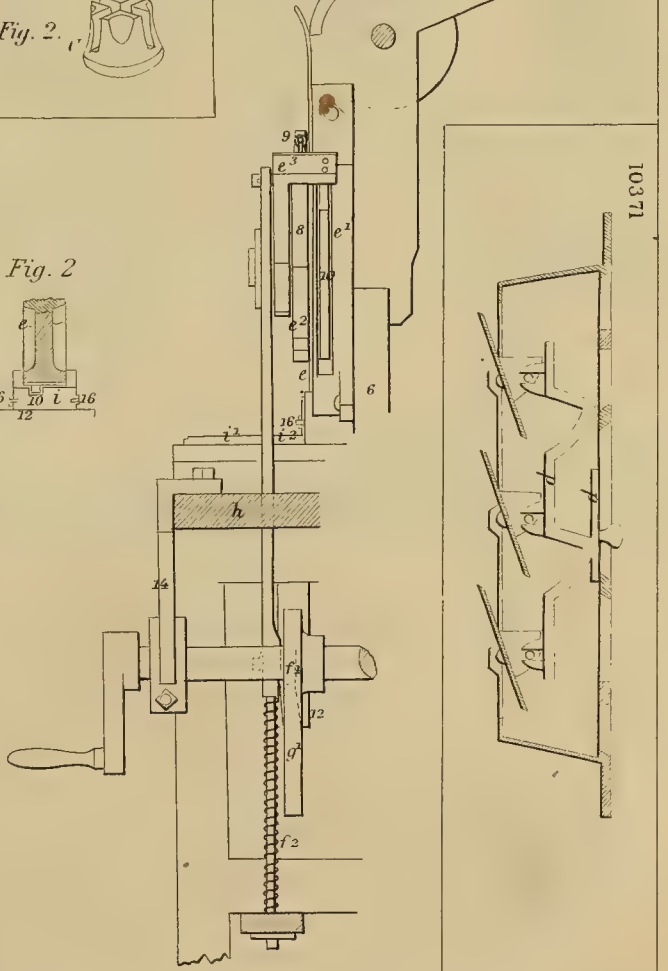

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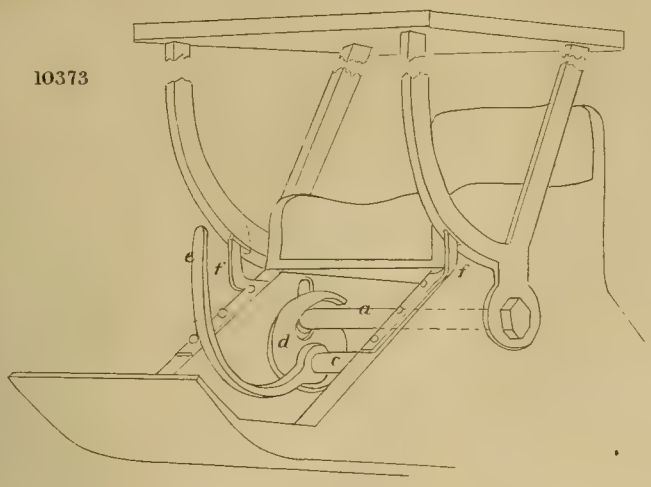

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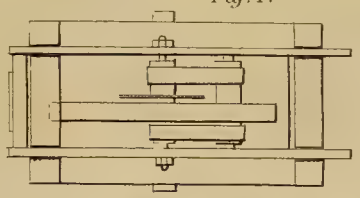

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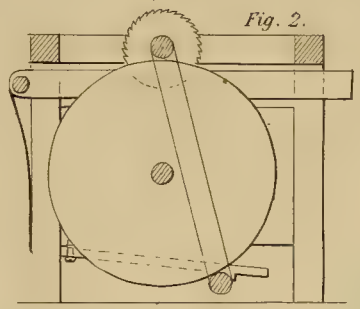

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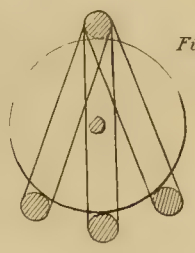

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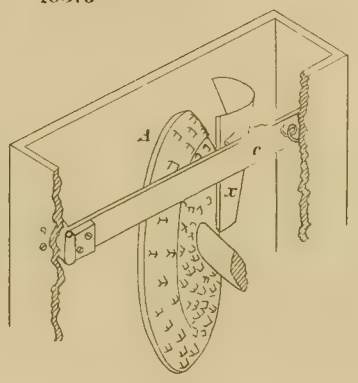

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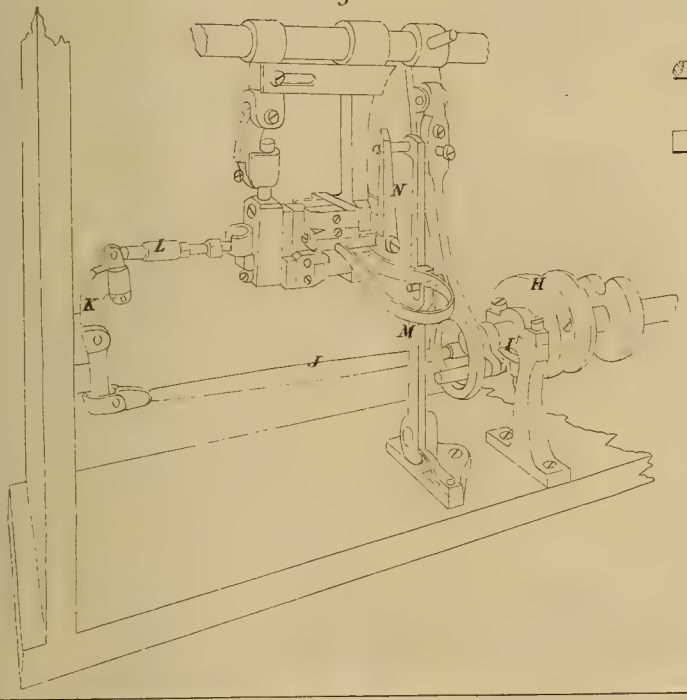

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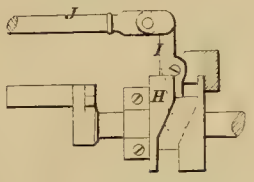

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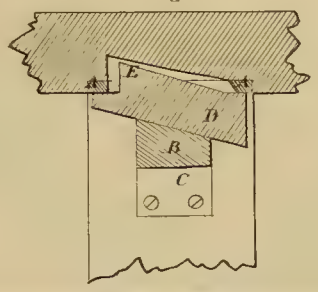

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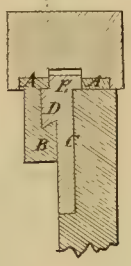

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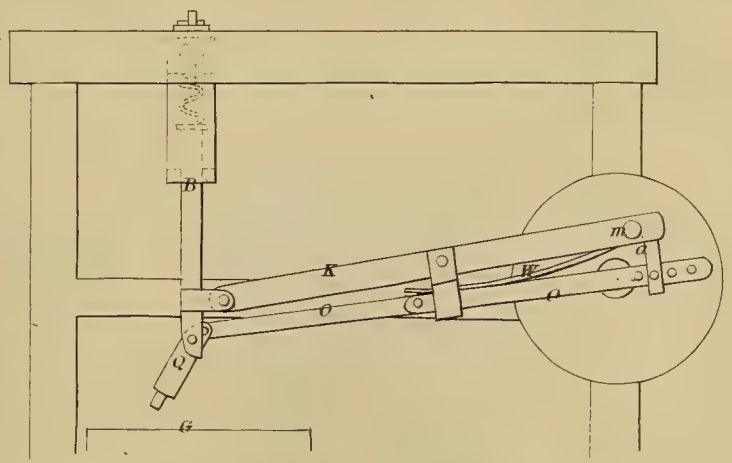

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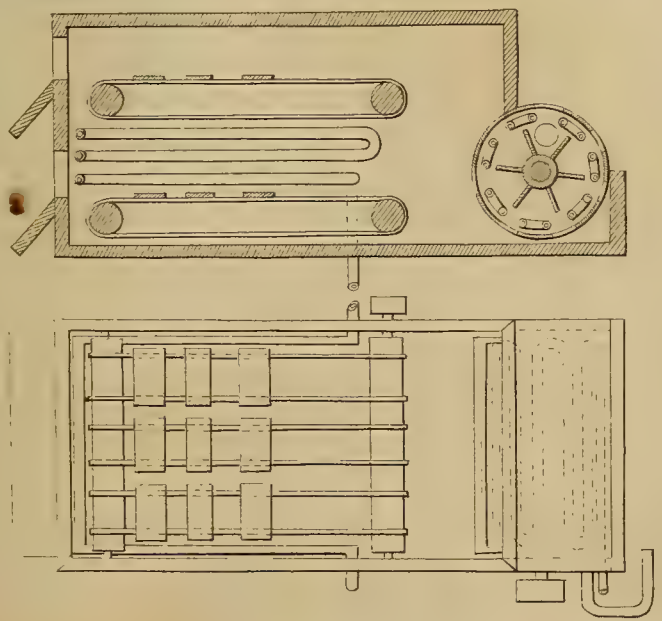

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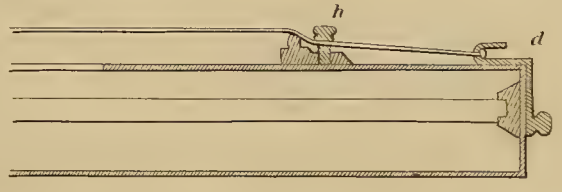

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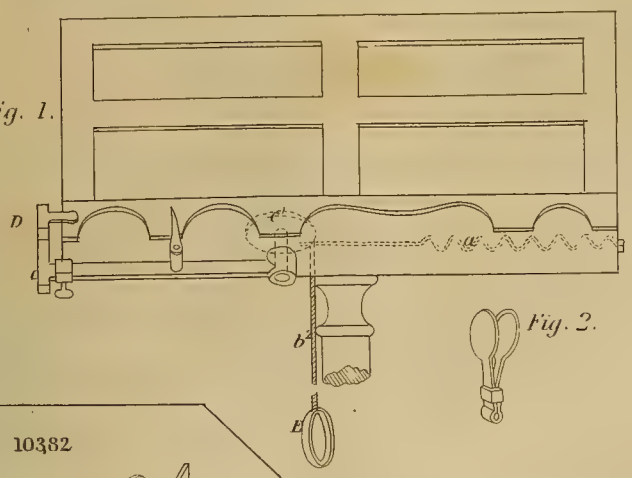

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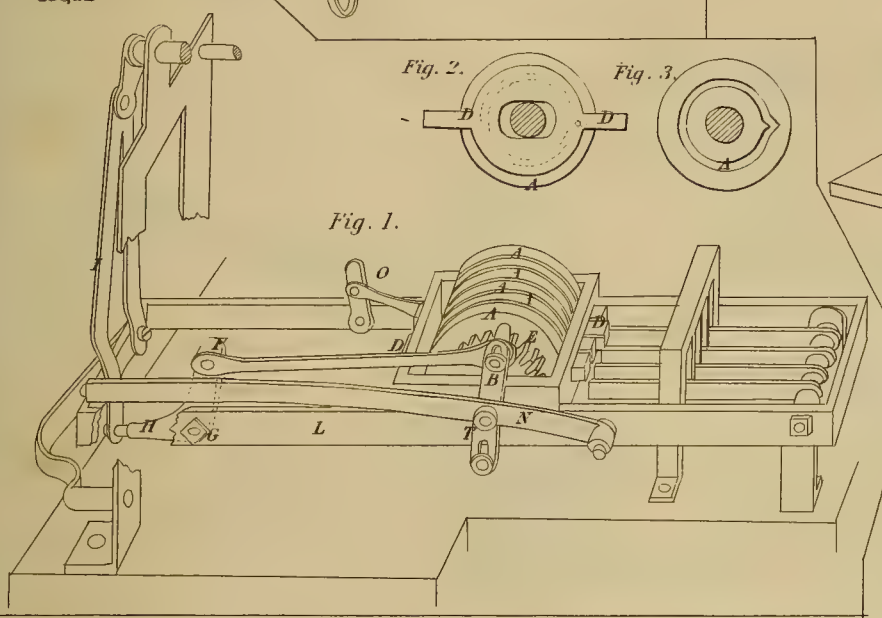

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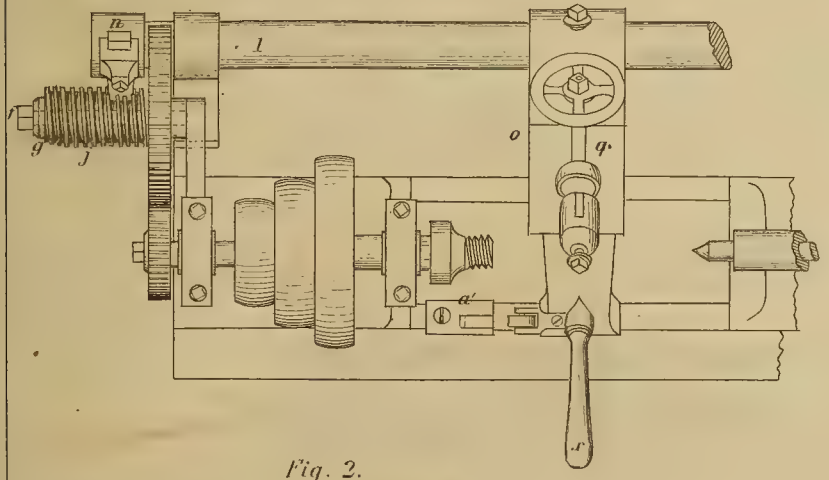

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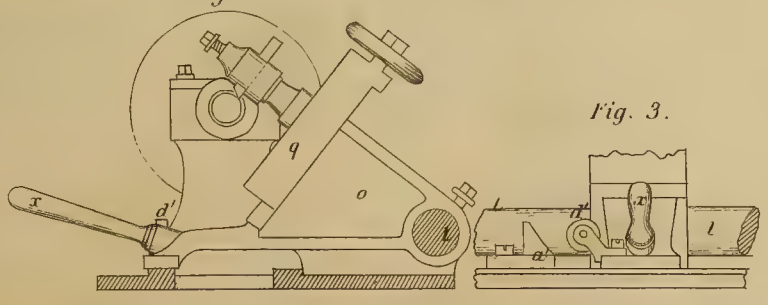

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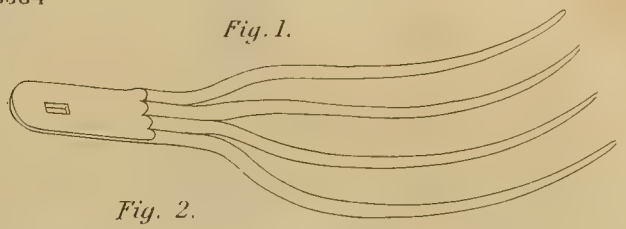

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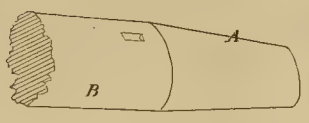

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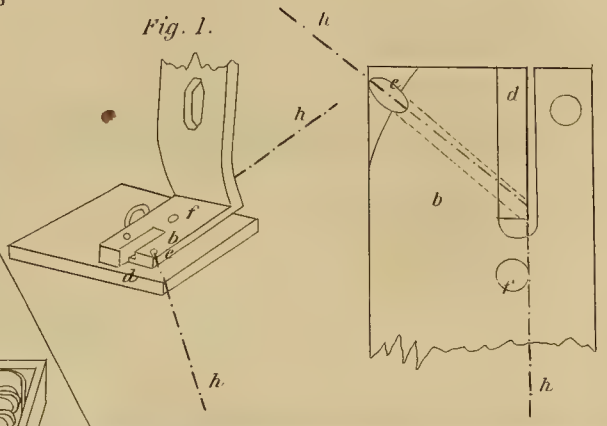

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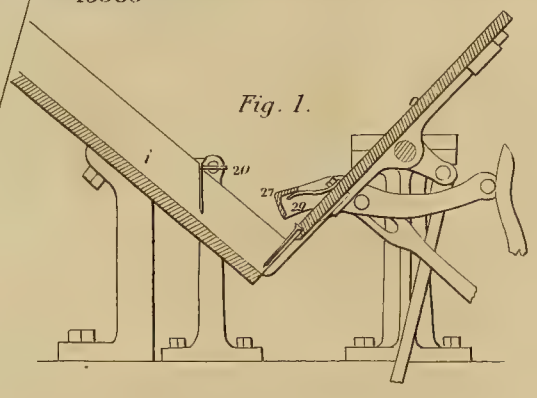

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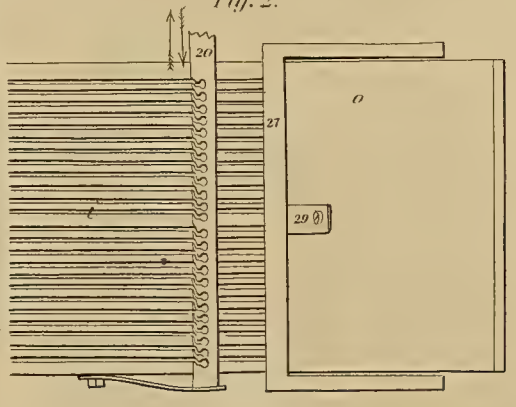

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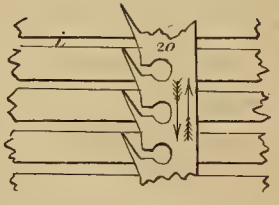

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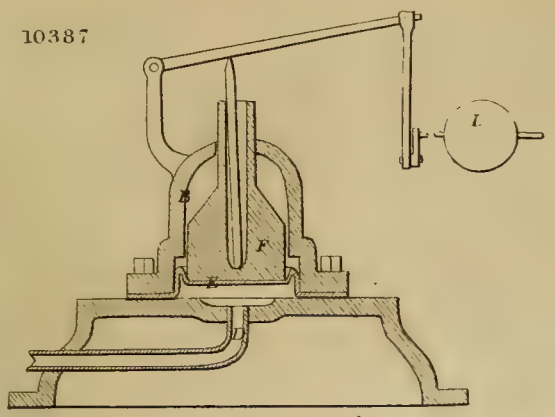

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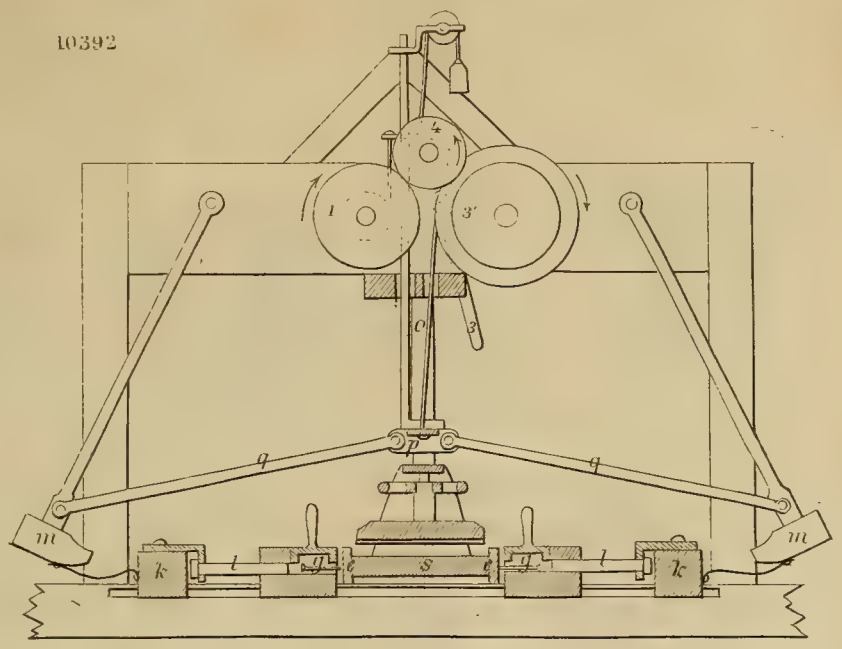

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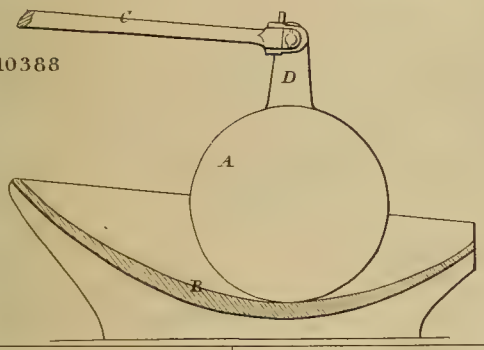

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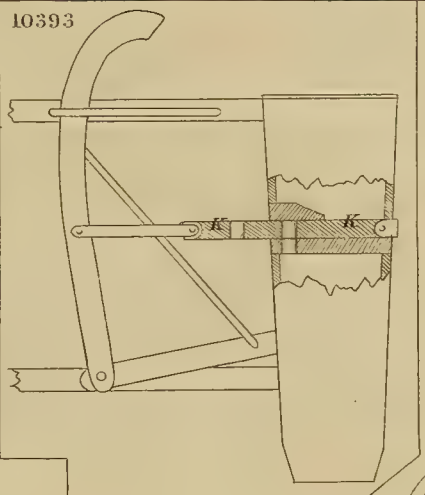

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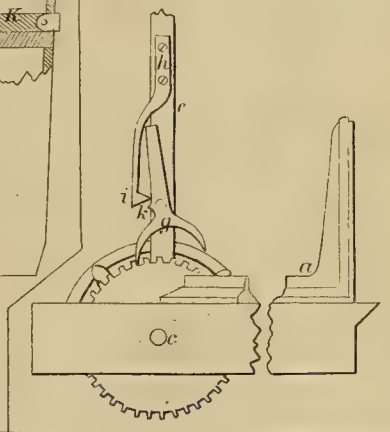

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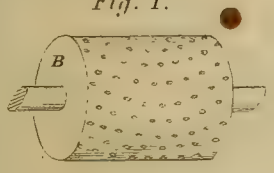

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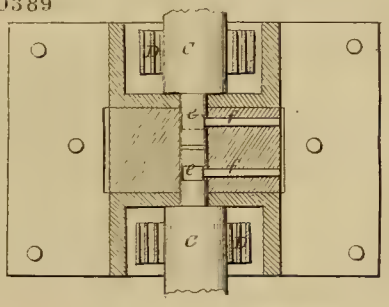

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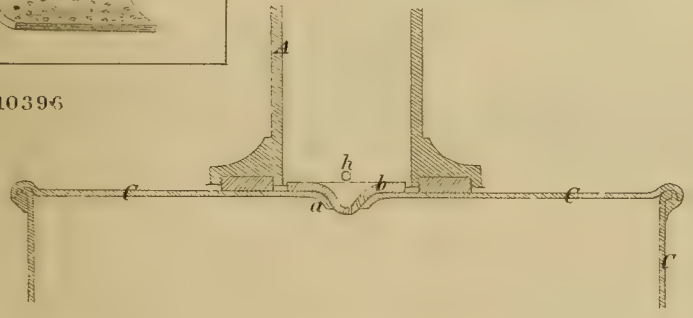

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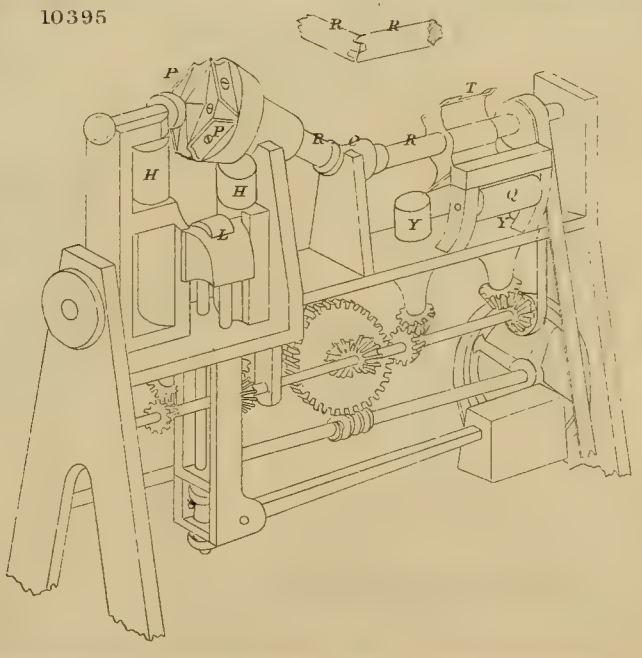

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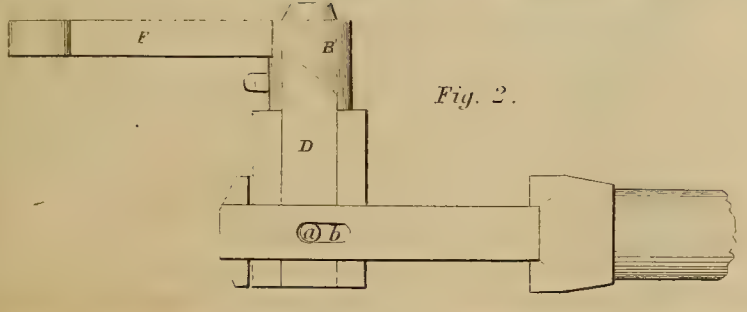

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Fig 1

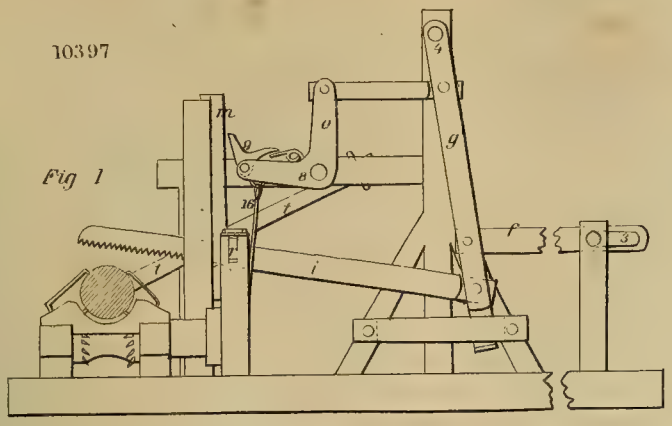
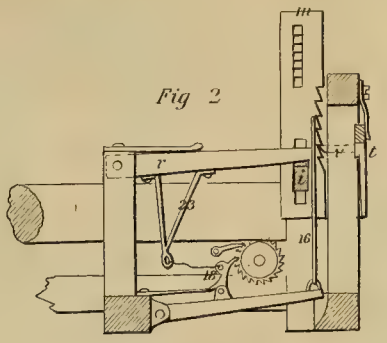


Fig 2



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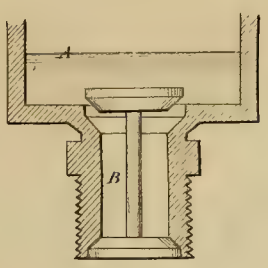

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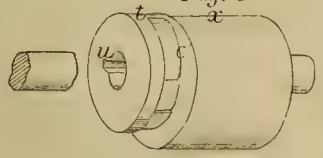

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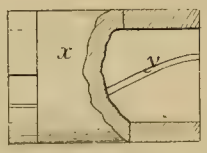
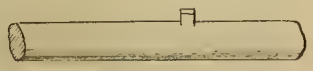
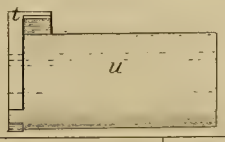


Fig. 3.

Fig. 4.





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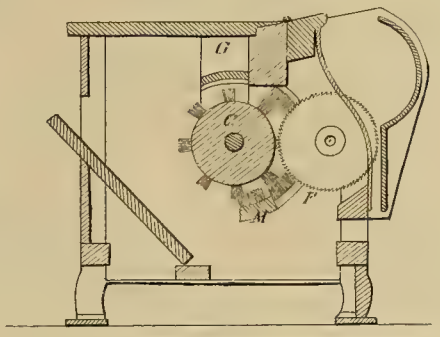

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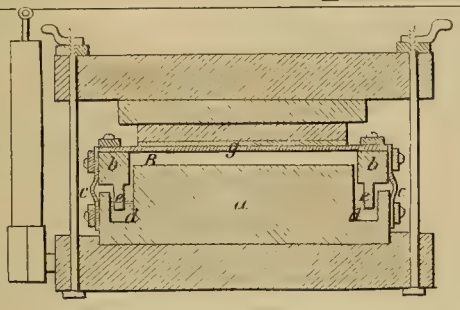

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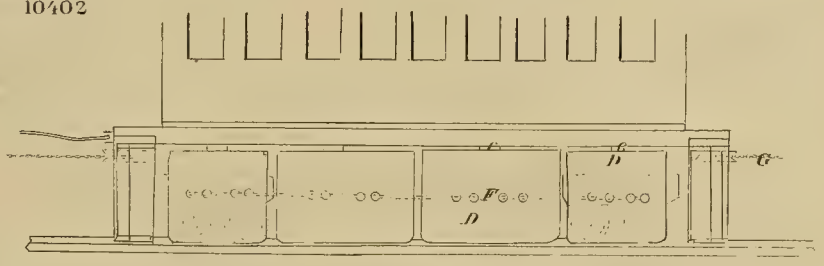

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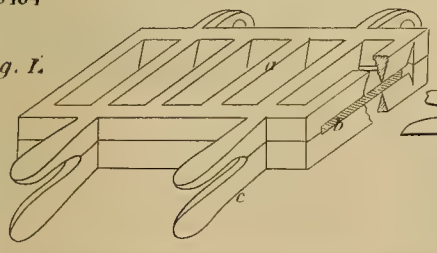
Fig. 1.



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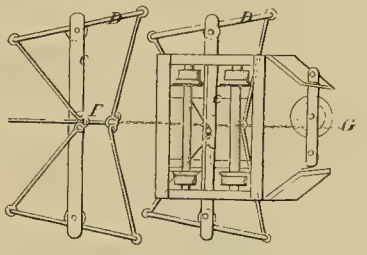

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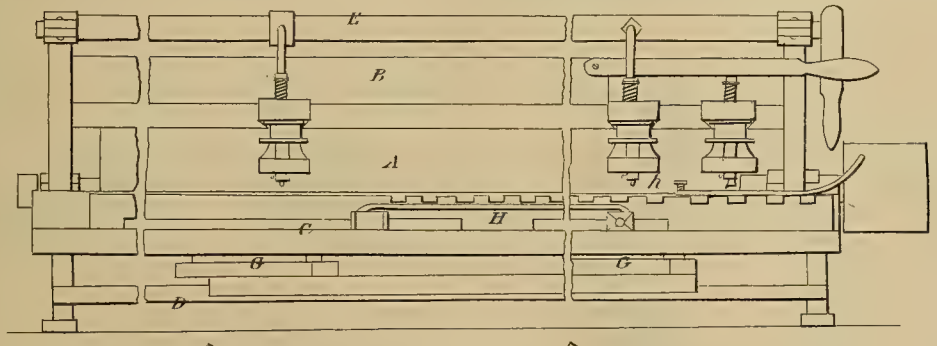

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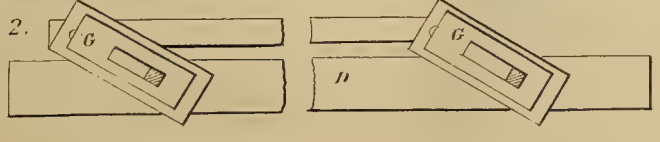

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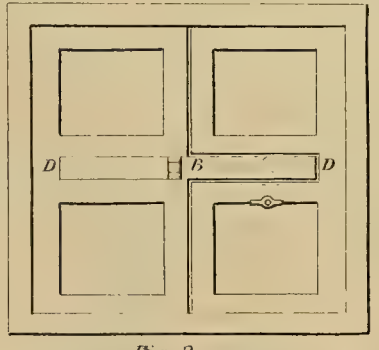

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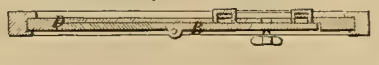

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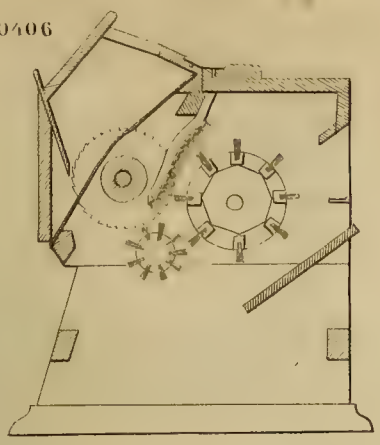

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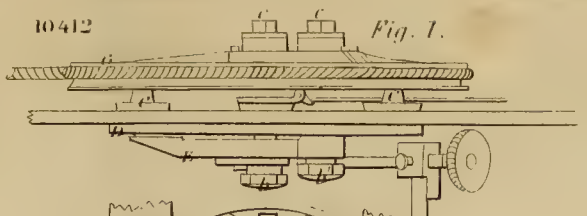

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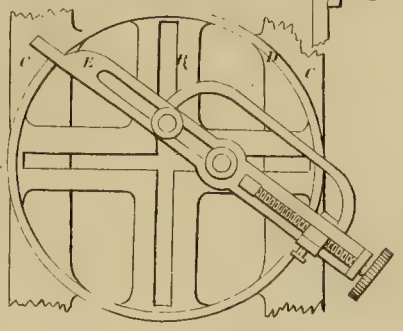

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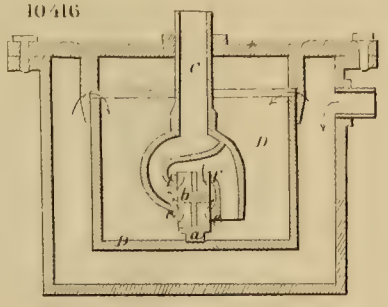

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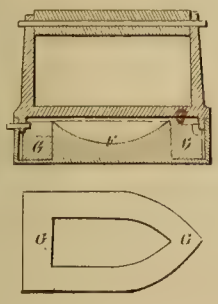
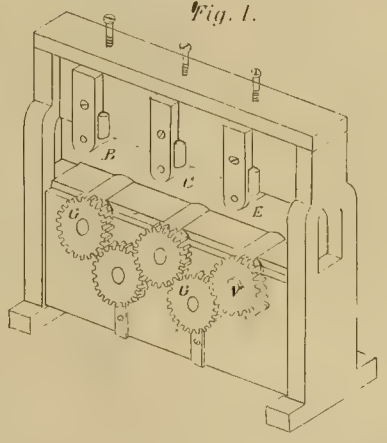


10413 Fig. 1.



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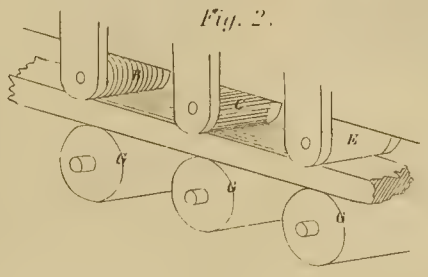

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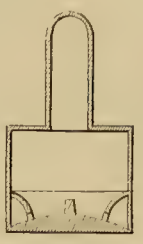

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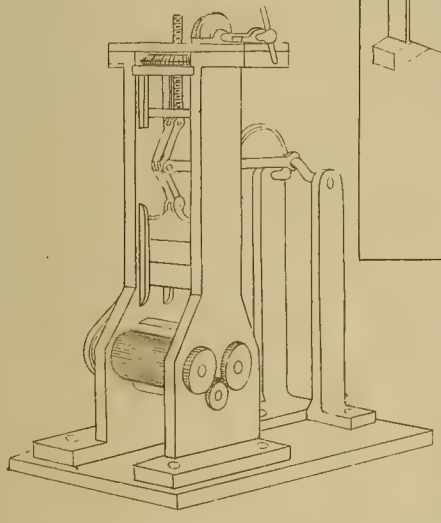

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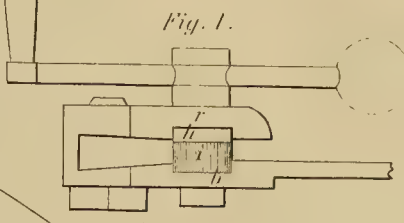

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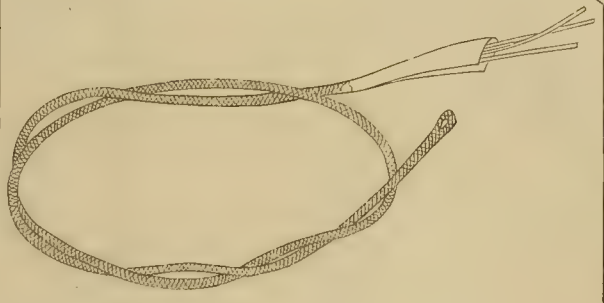

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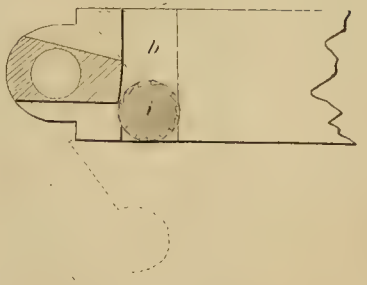

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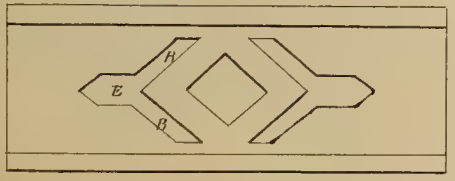
Fig. 1.

Fig. 2.

Fig. 3.



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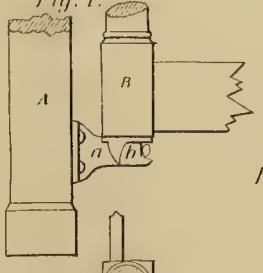

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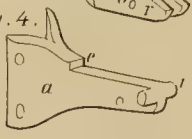

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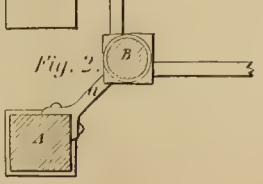

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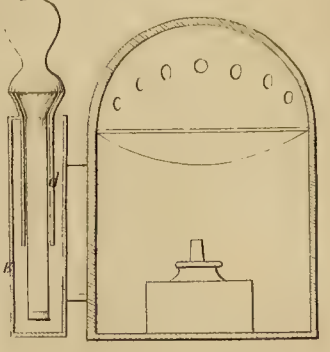

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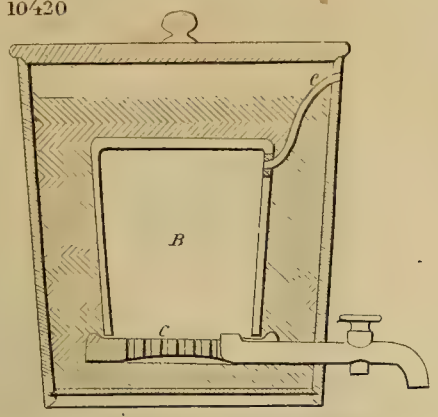

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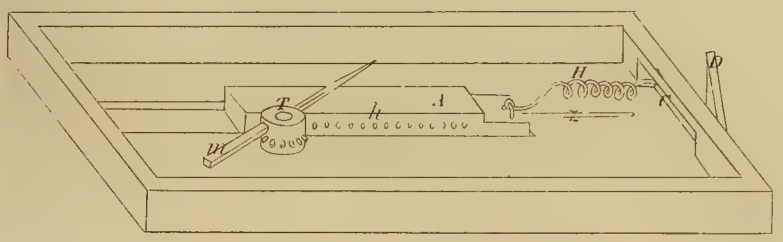

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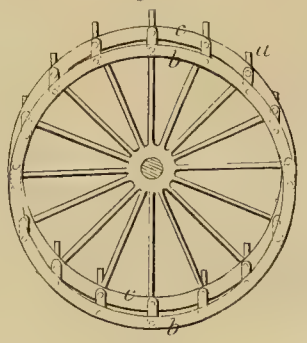
Fig. 1.



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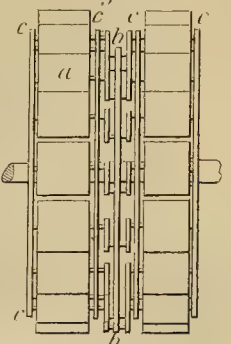

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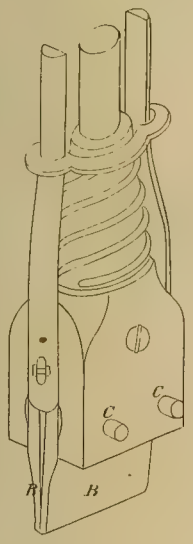

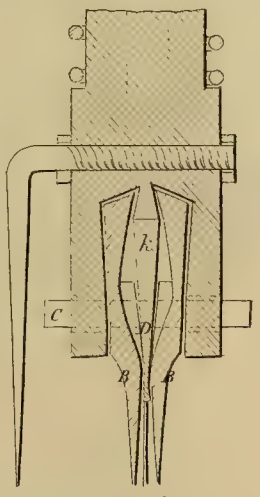

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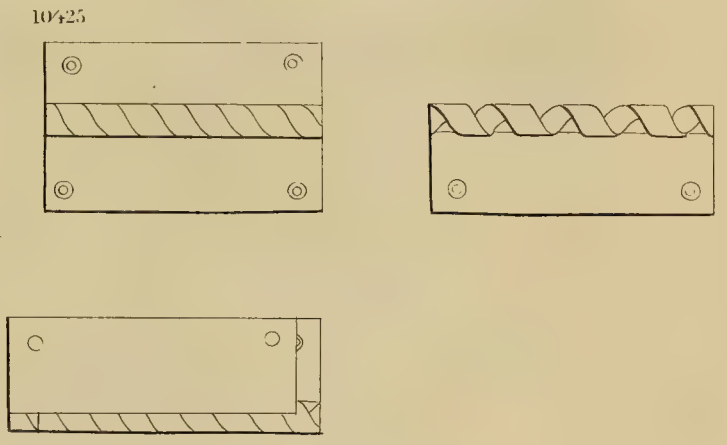

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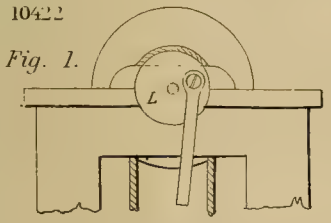

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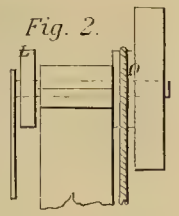

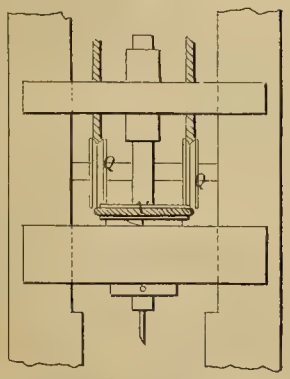

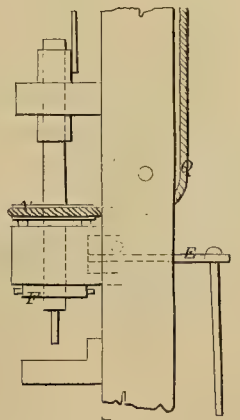

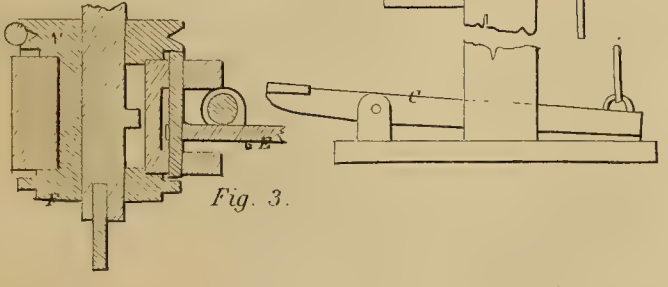

Fig. 3.

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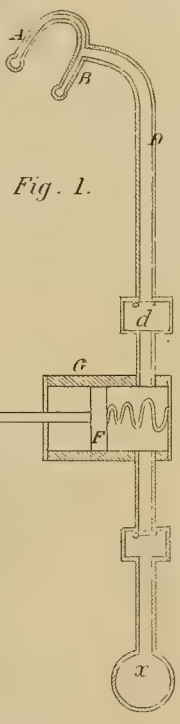
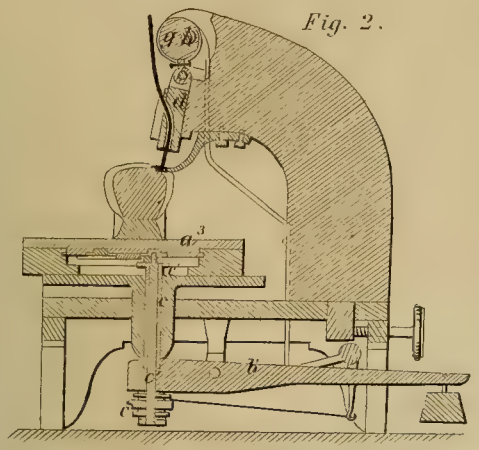


Fig. 1.

Fig. 2.

10427

Fig. 2.



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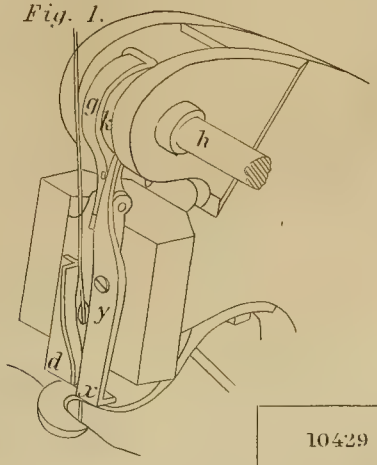

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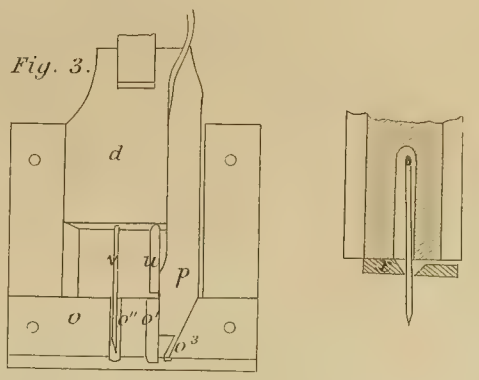

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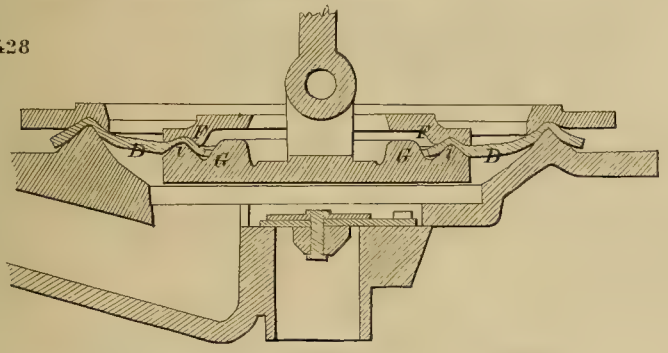

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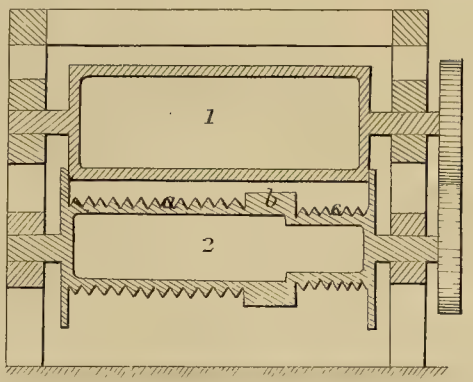

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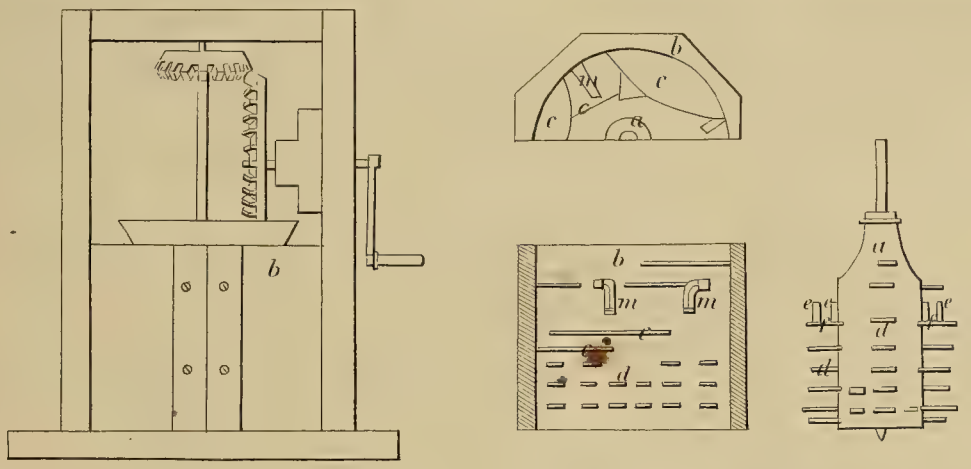

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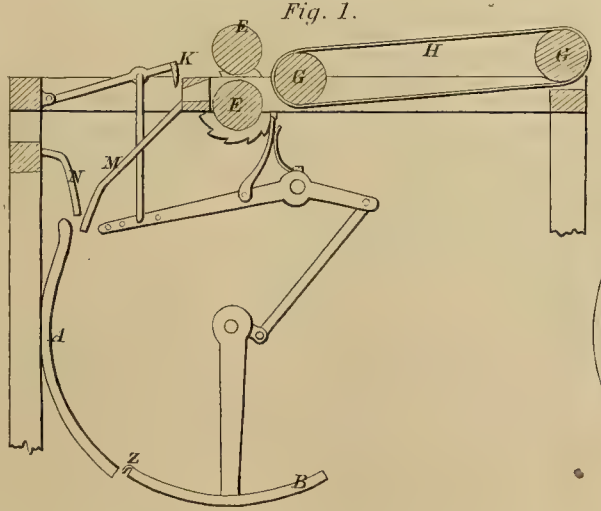

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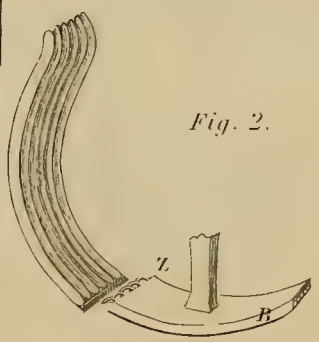

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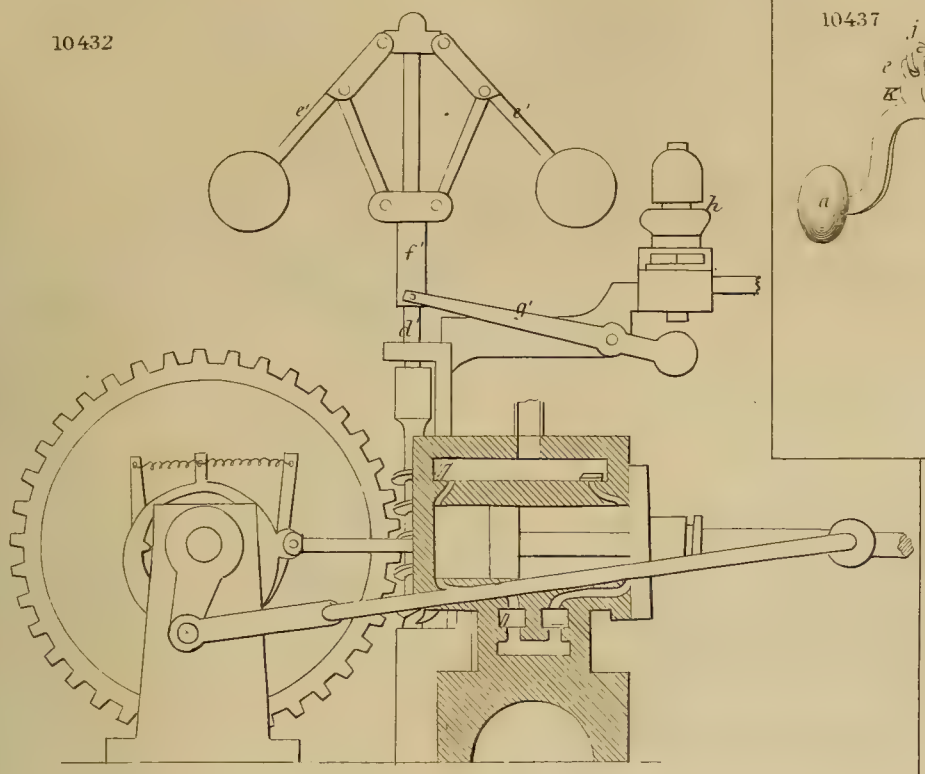

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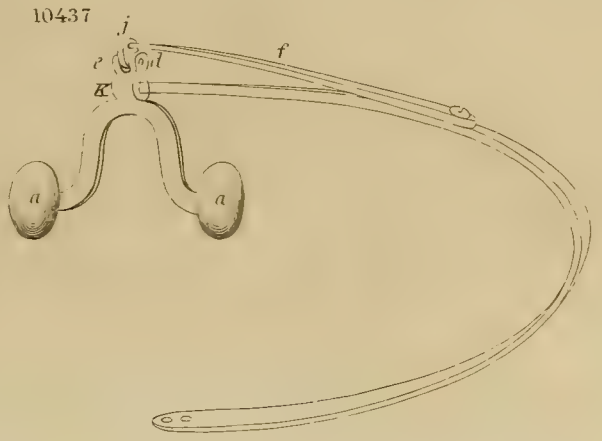
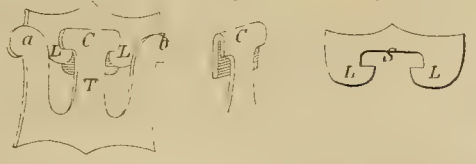


10436

Fig. 1. Fig. 2. Fig. 3.



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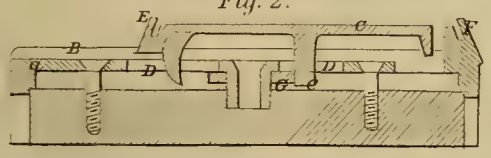

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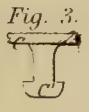
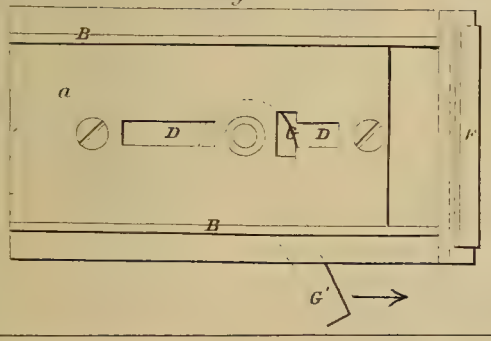


Fig 1.



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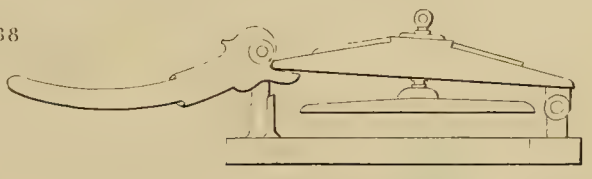

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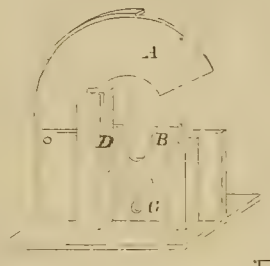

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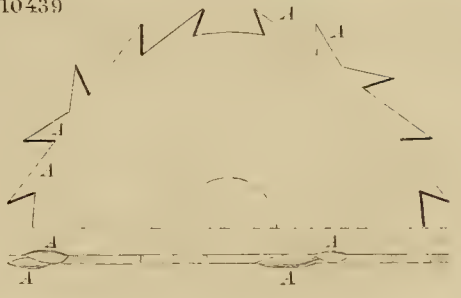

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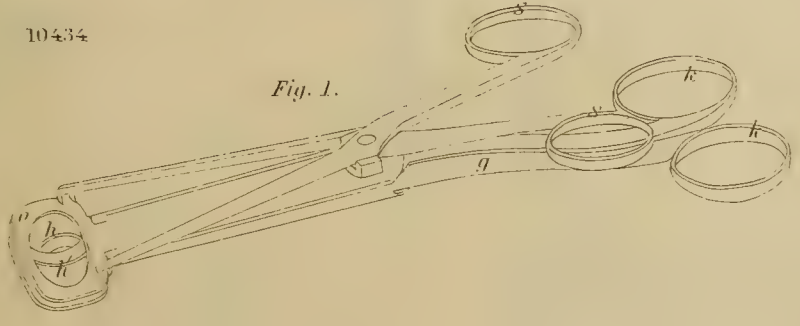

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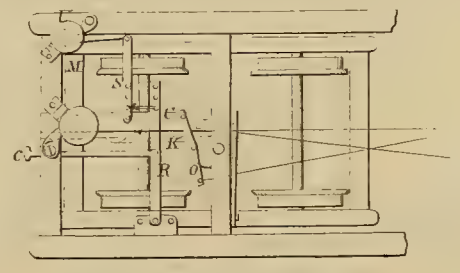

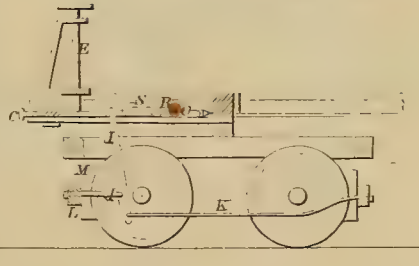

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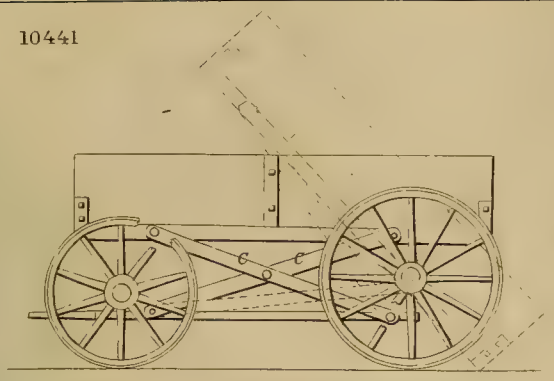

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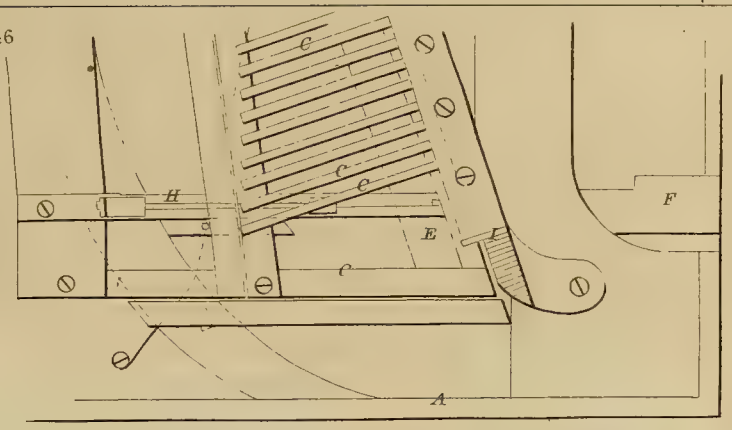

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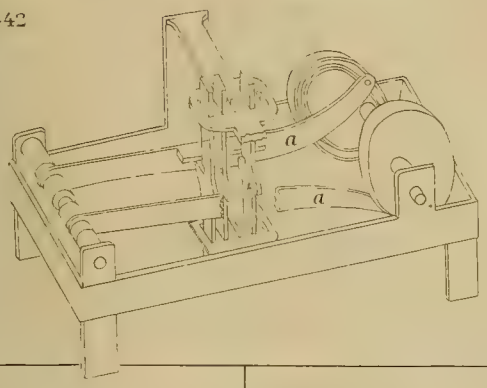

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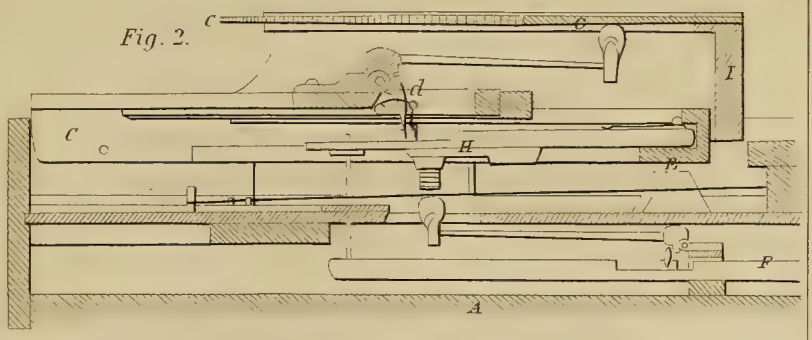

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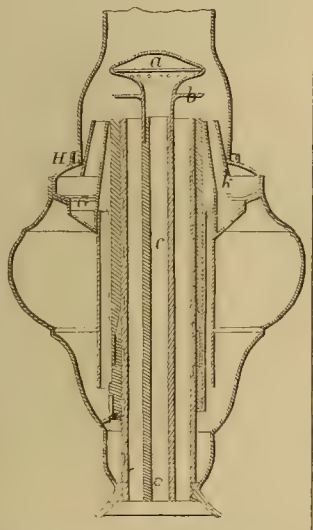

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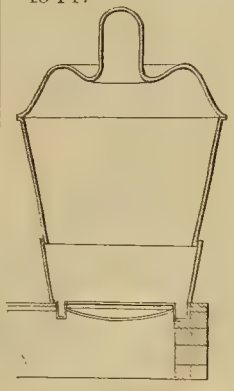

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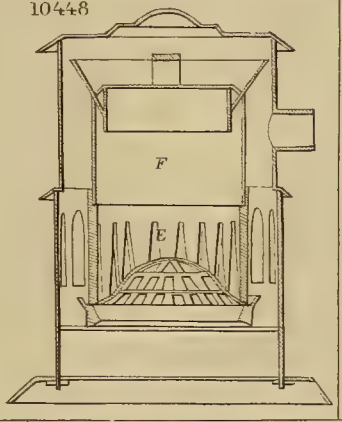

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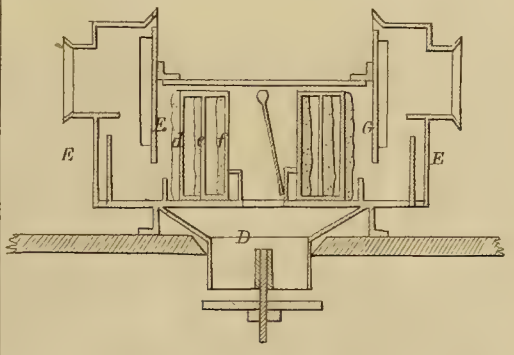

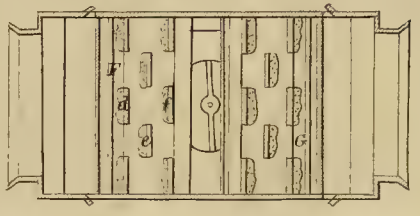

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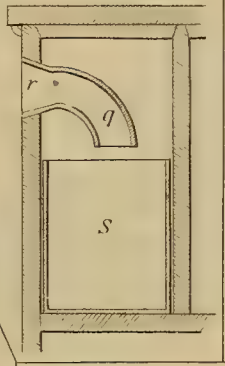

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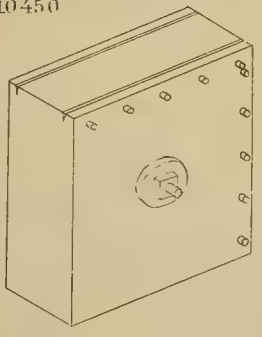

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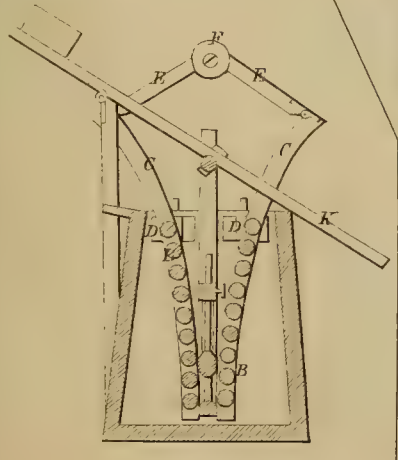

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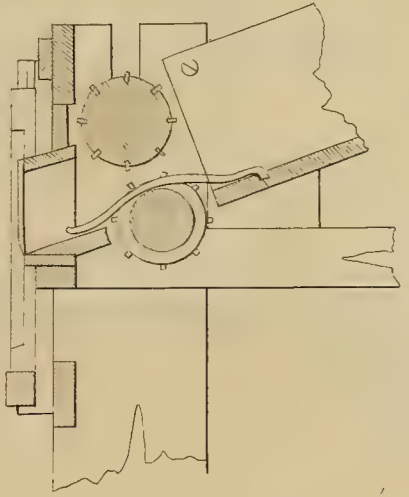

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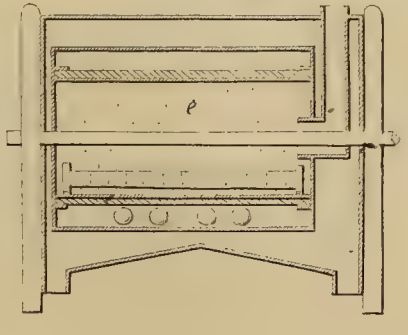

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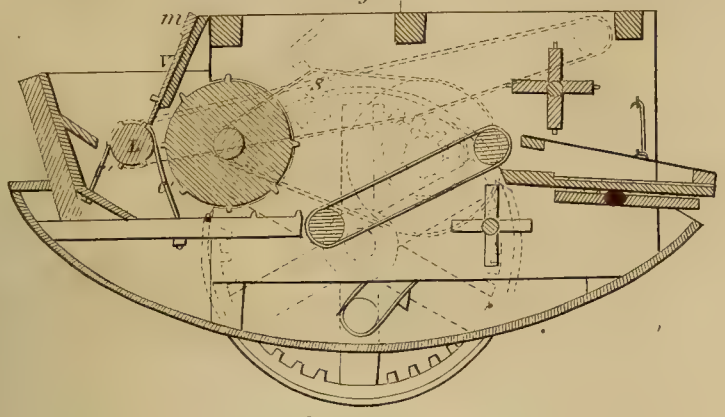

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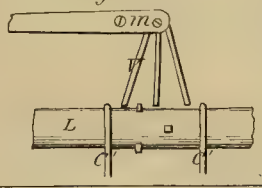

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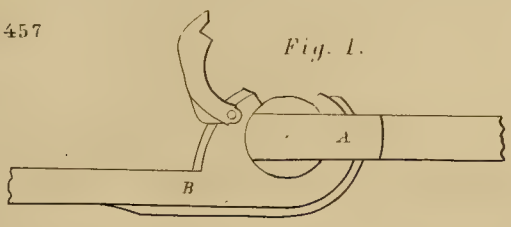

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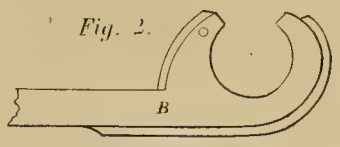
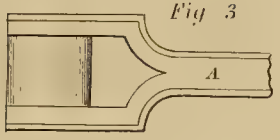


Fig 3



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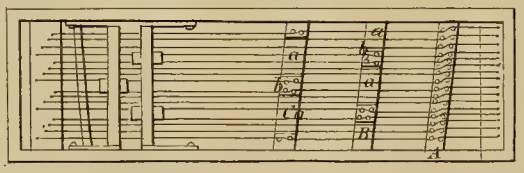

Fig. 3.

Fig. 2.

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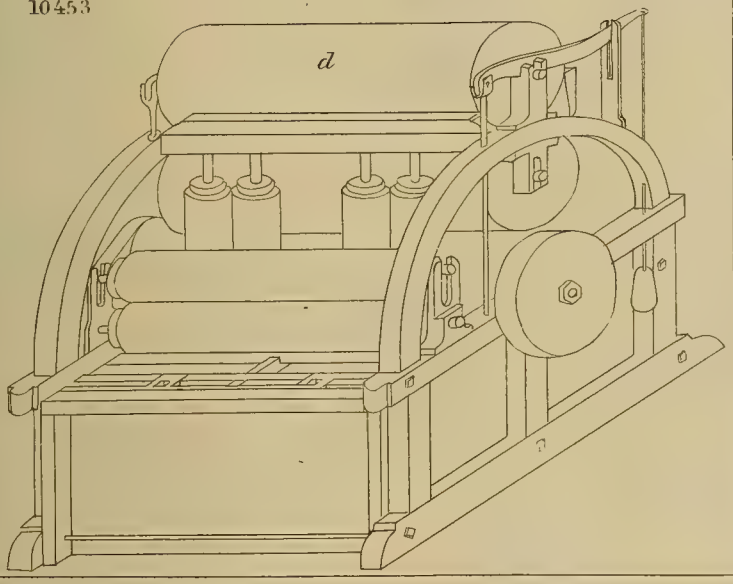

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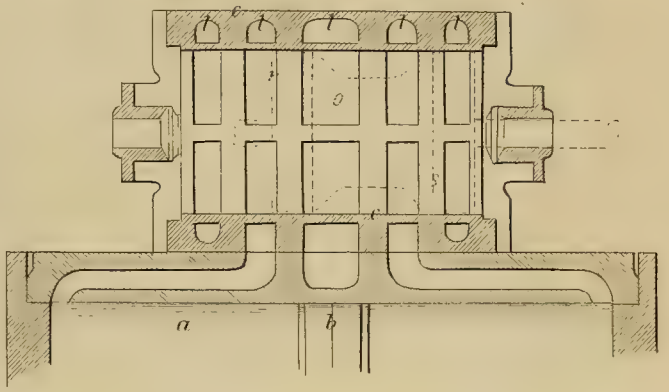

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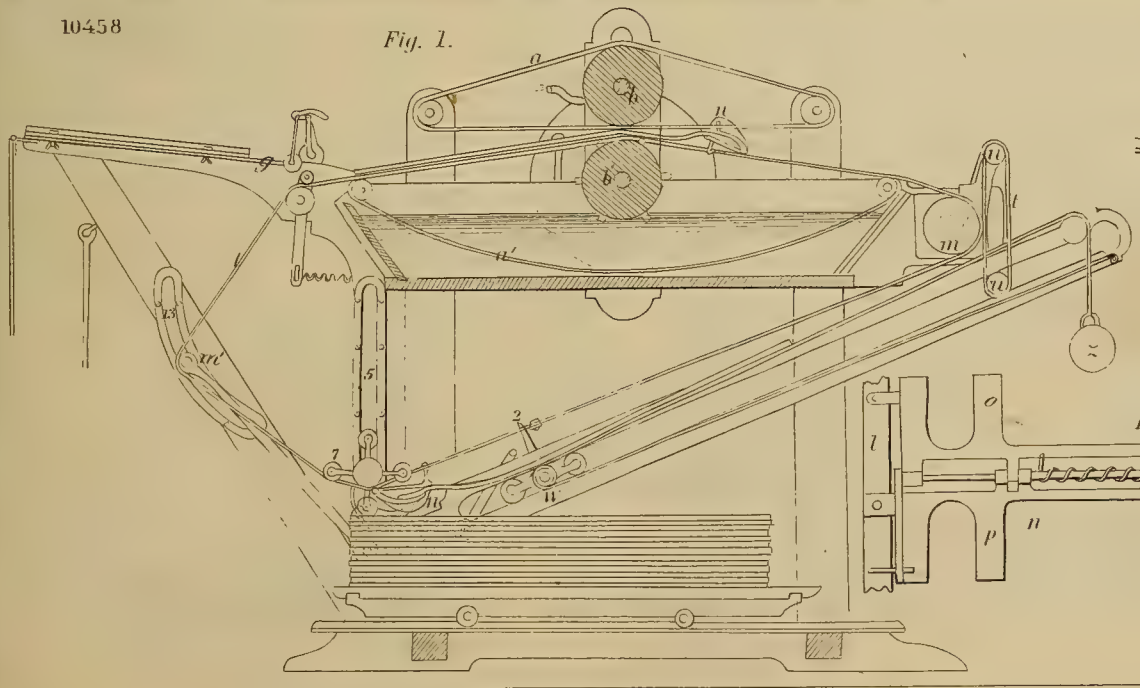

Fig 3

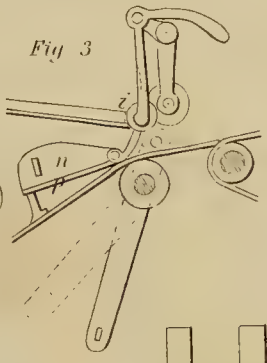

Fig 2

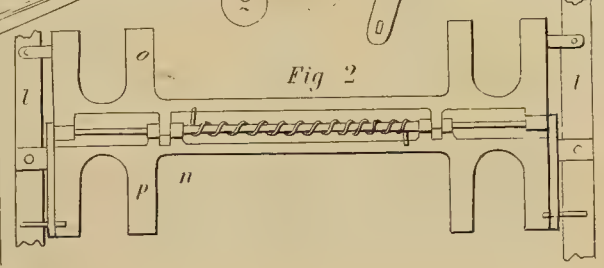

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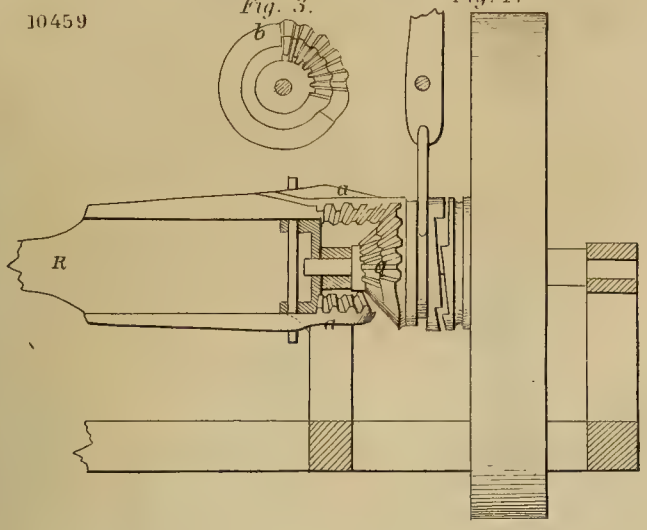
Fig. 3.

Fig. 1.



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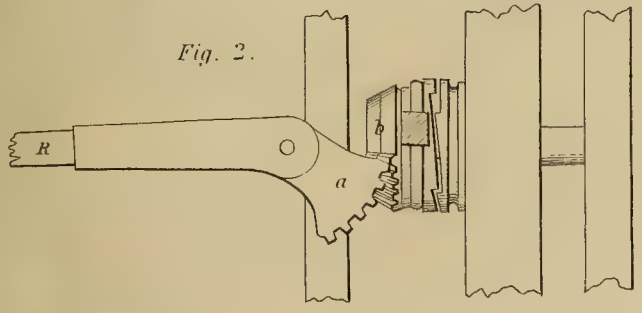

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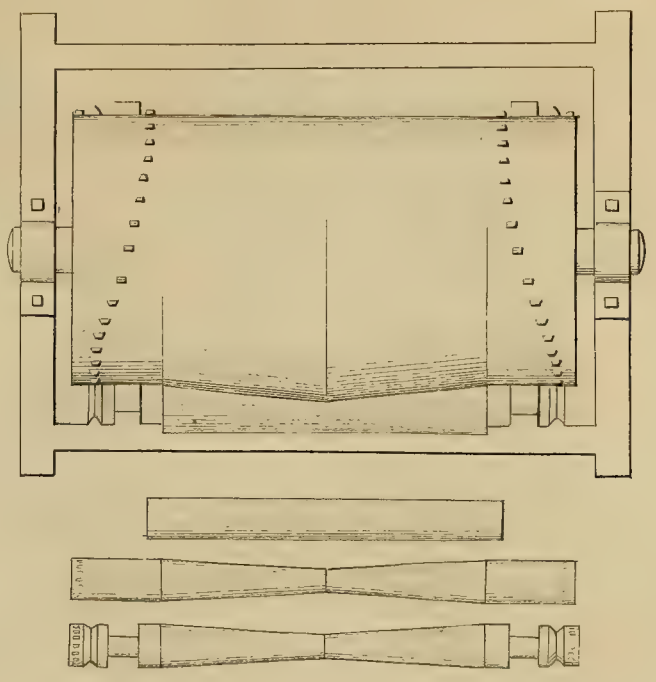

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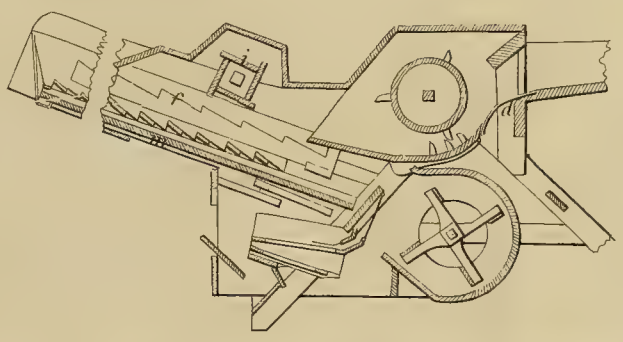

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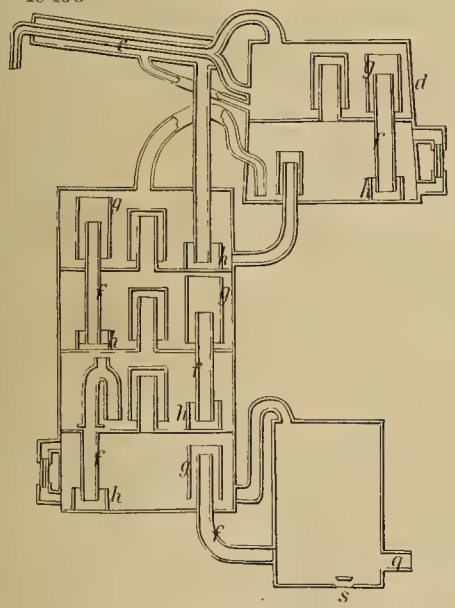

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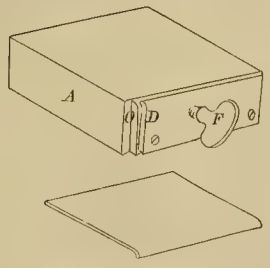

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Fig. 1.

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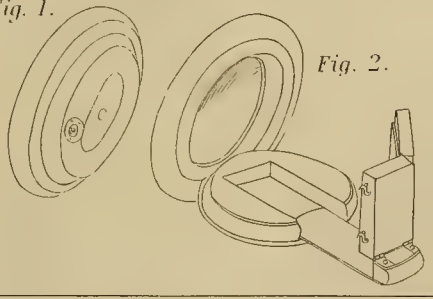

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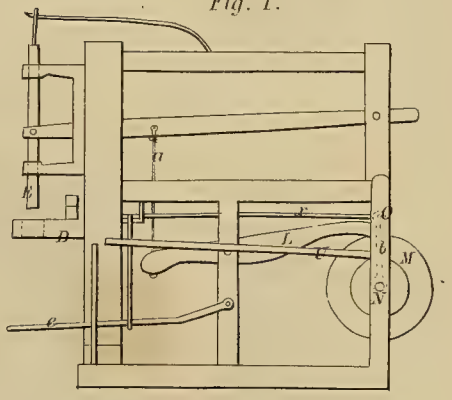

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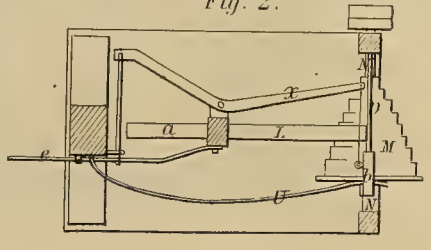

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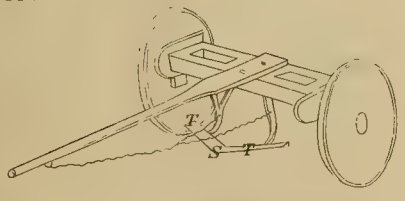

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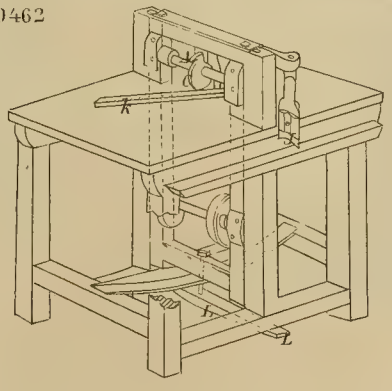

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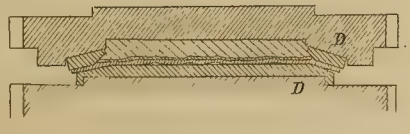

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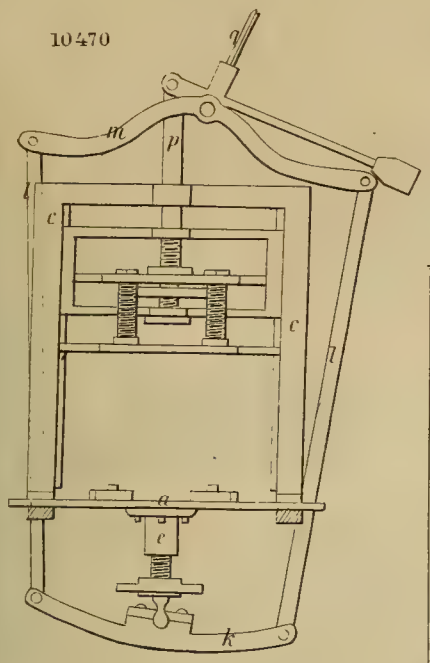

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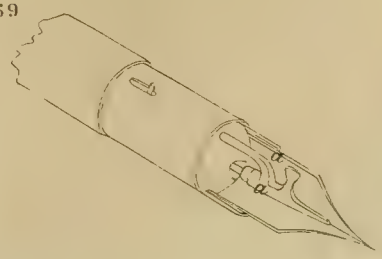

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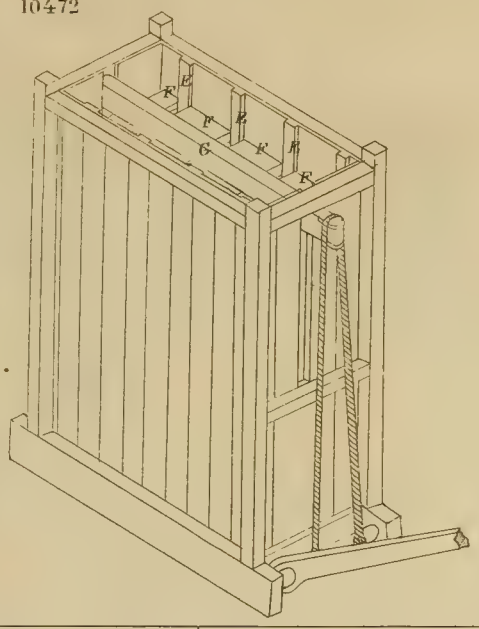

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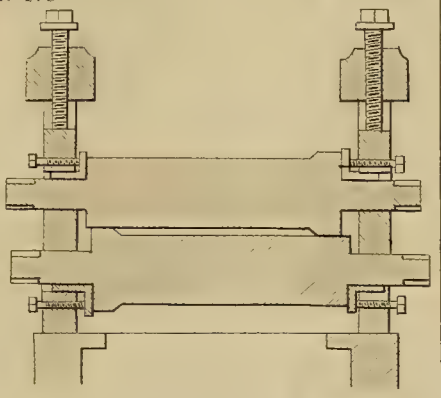

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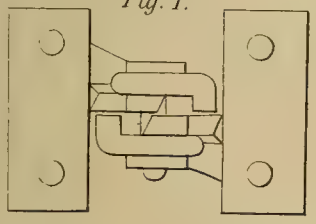

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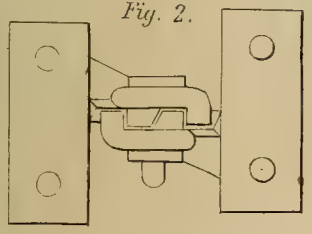

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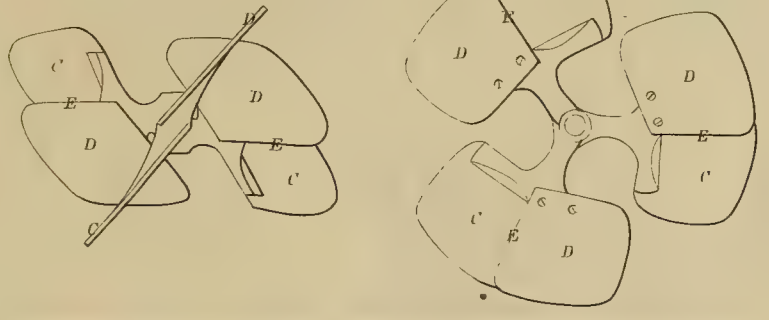

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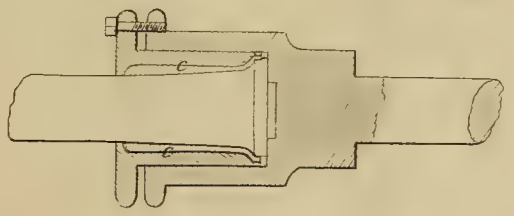

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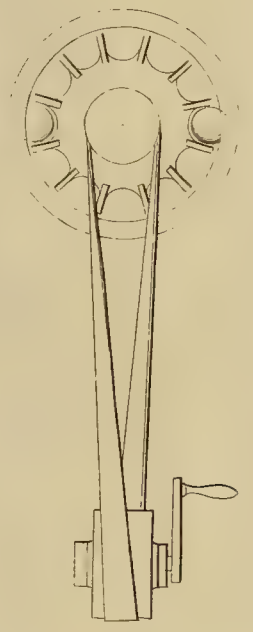

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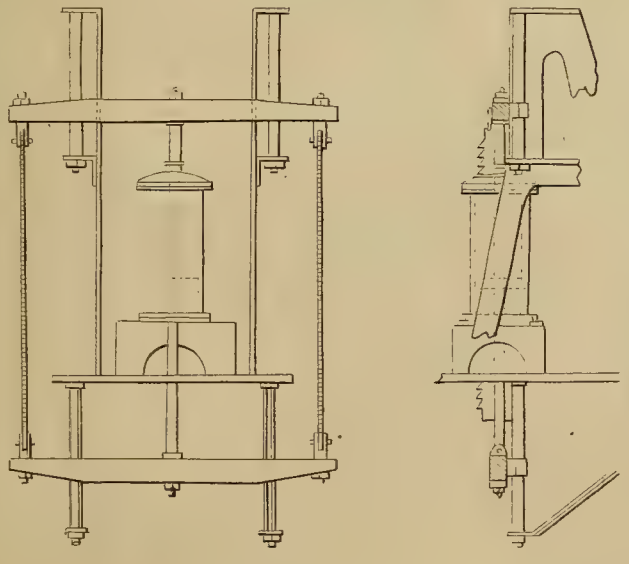

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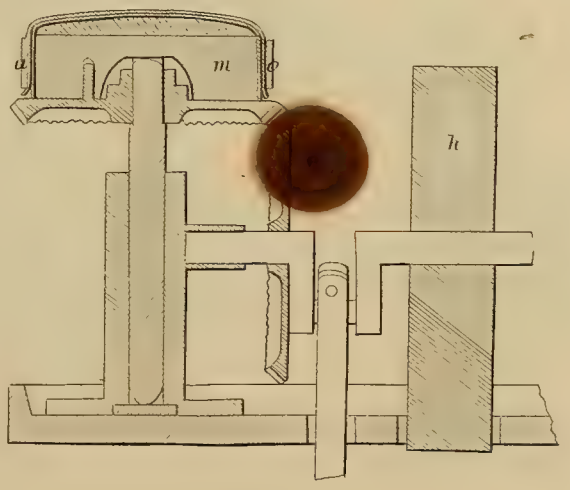

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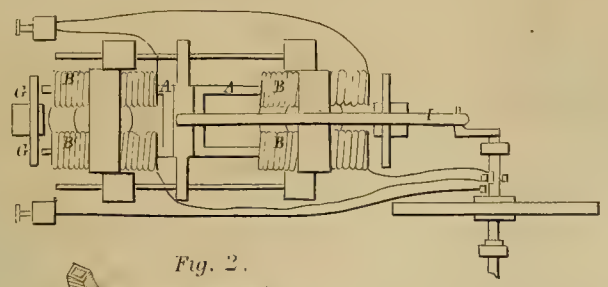

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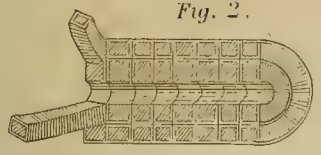

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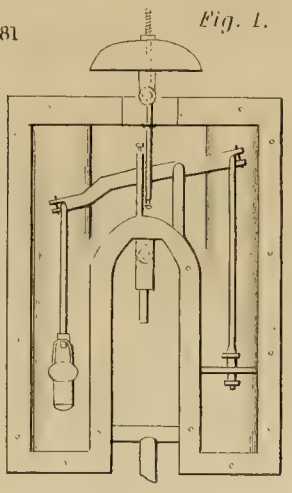

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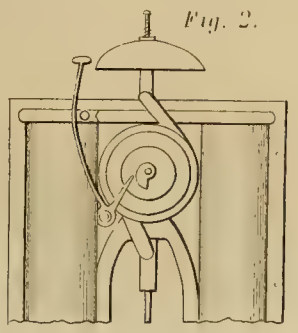

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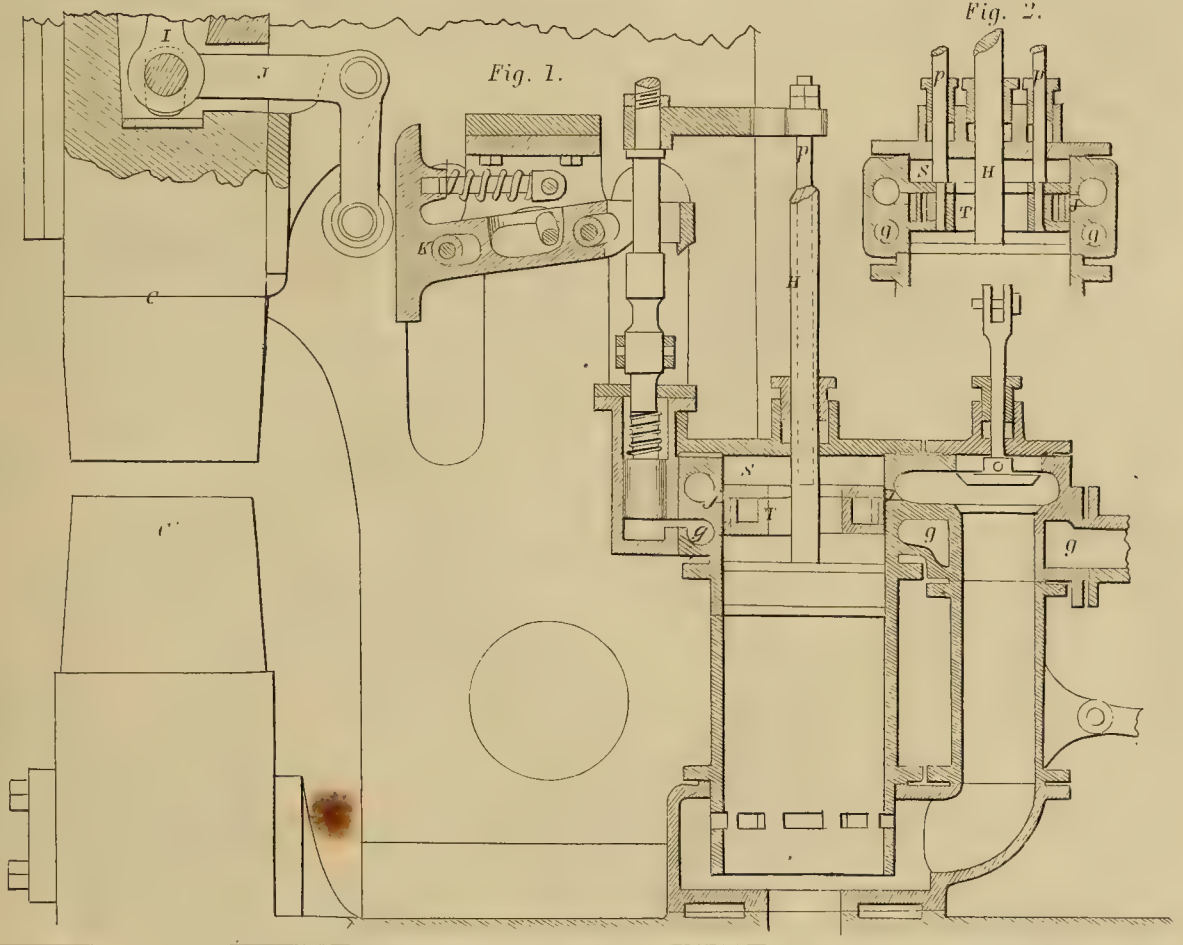

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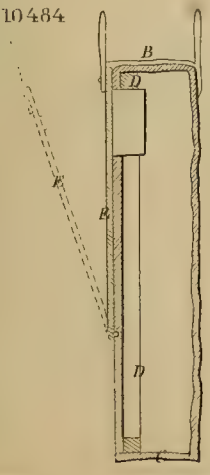

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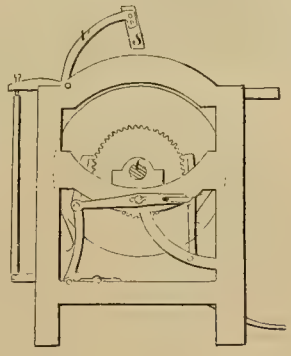

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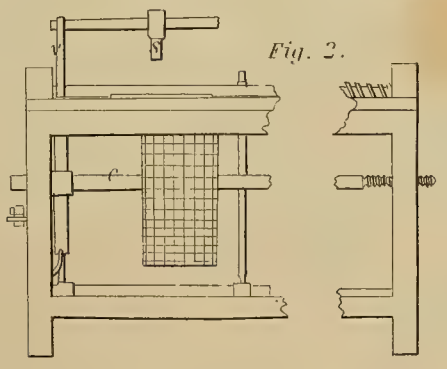

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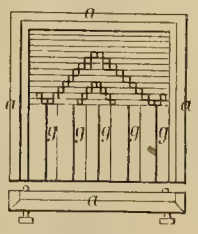

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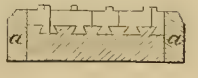

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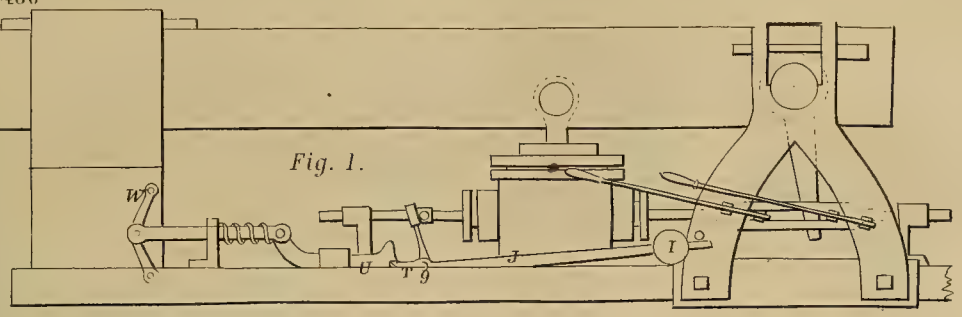

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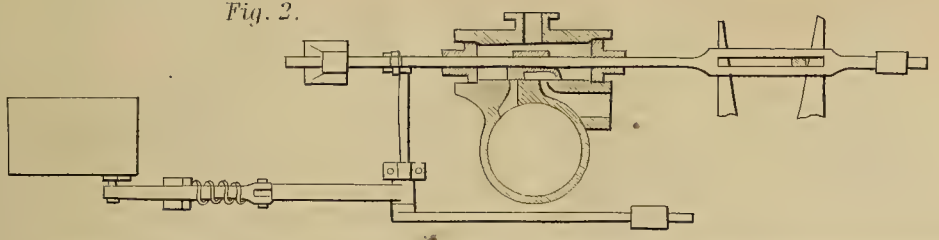

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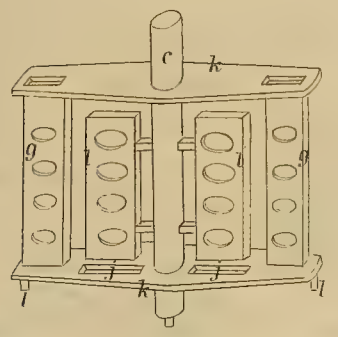

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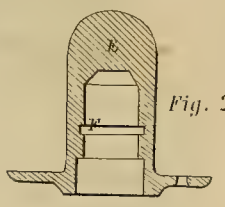

Fig. 2.

Fig. 3

Fig. 4.

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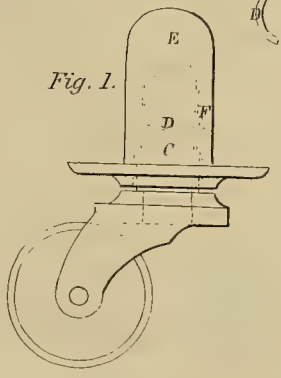

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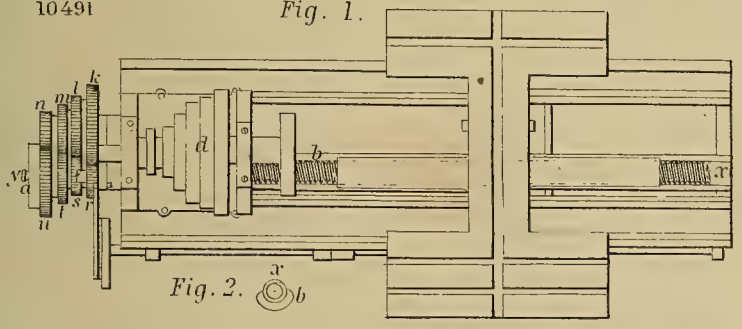

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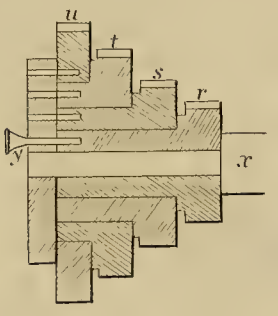

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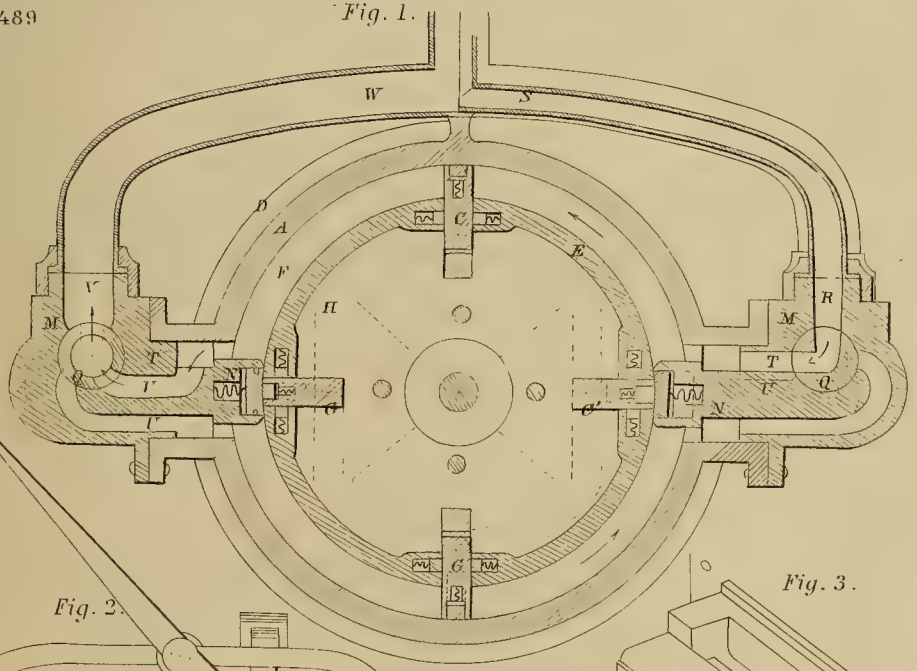

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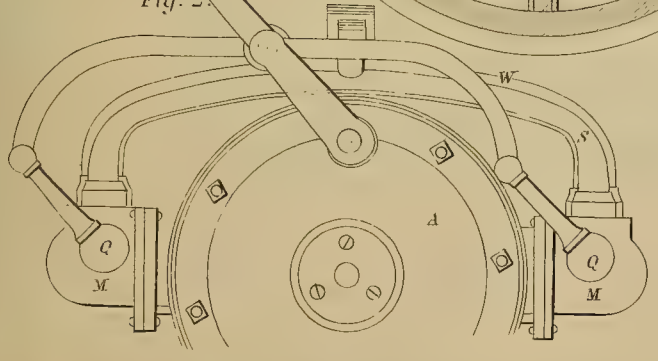

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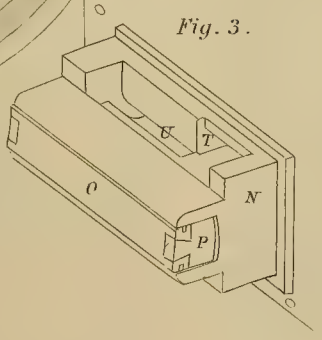

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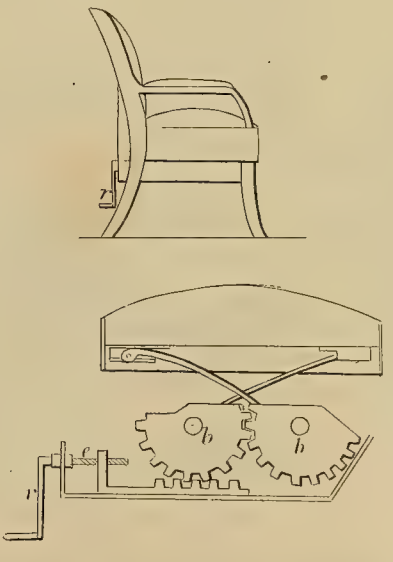

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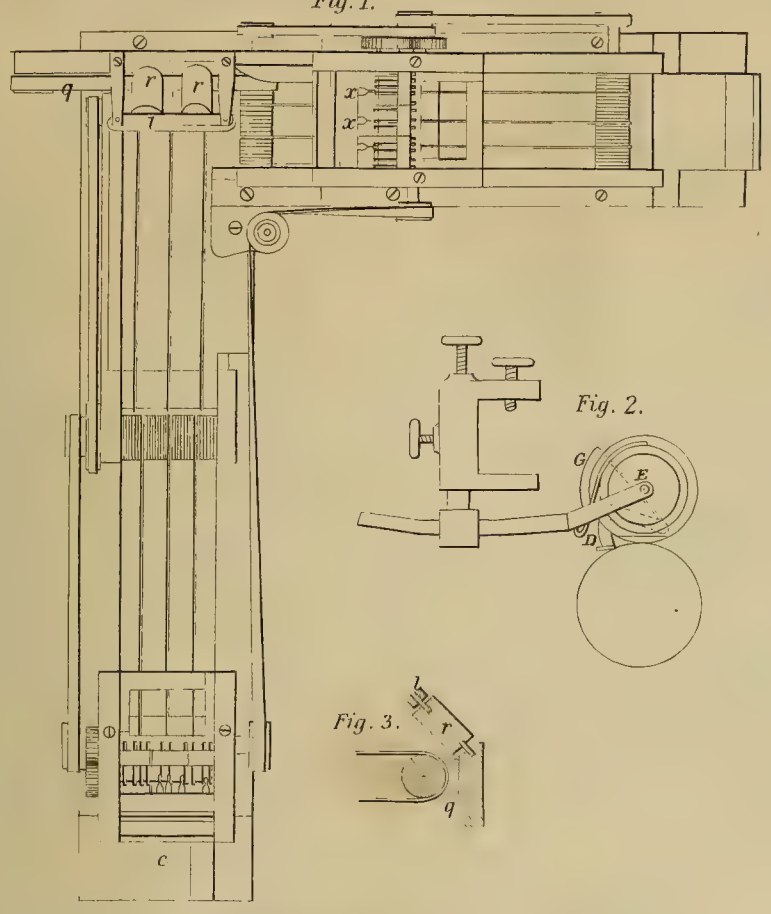

Fig. 2.

Fig. 3.

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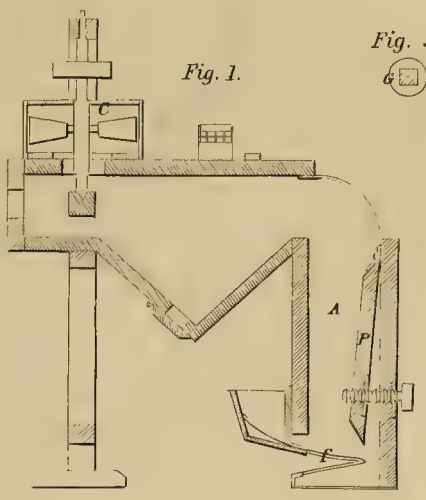

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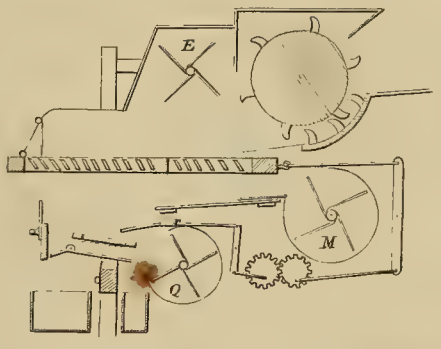

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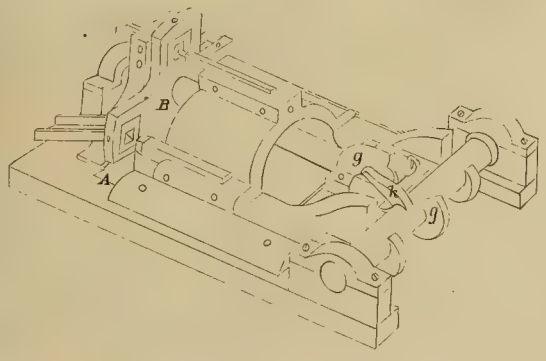

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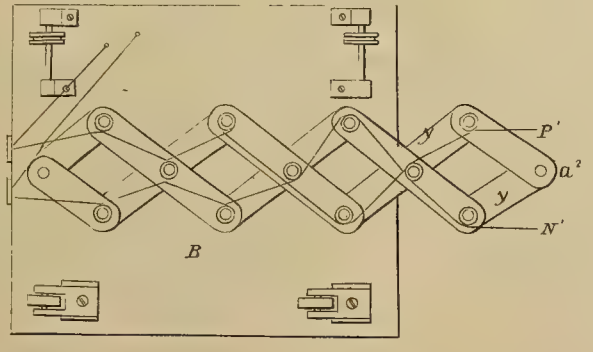

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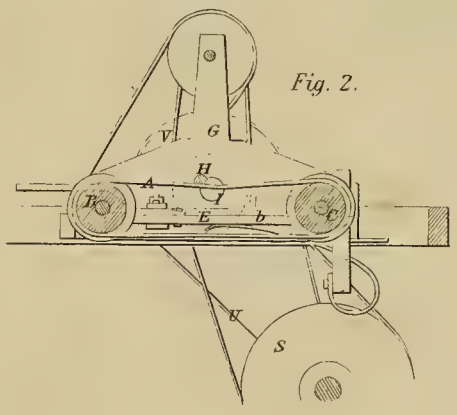

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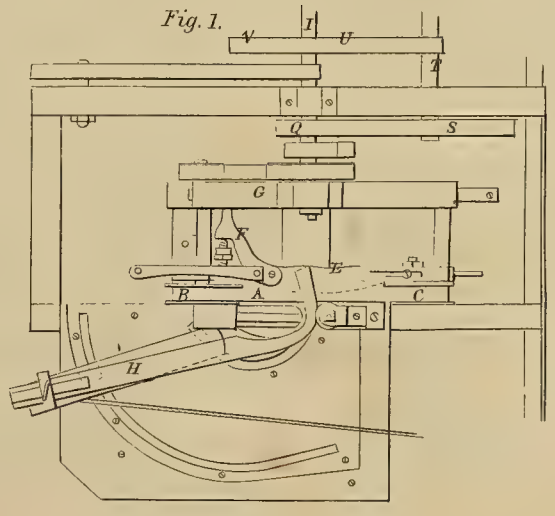

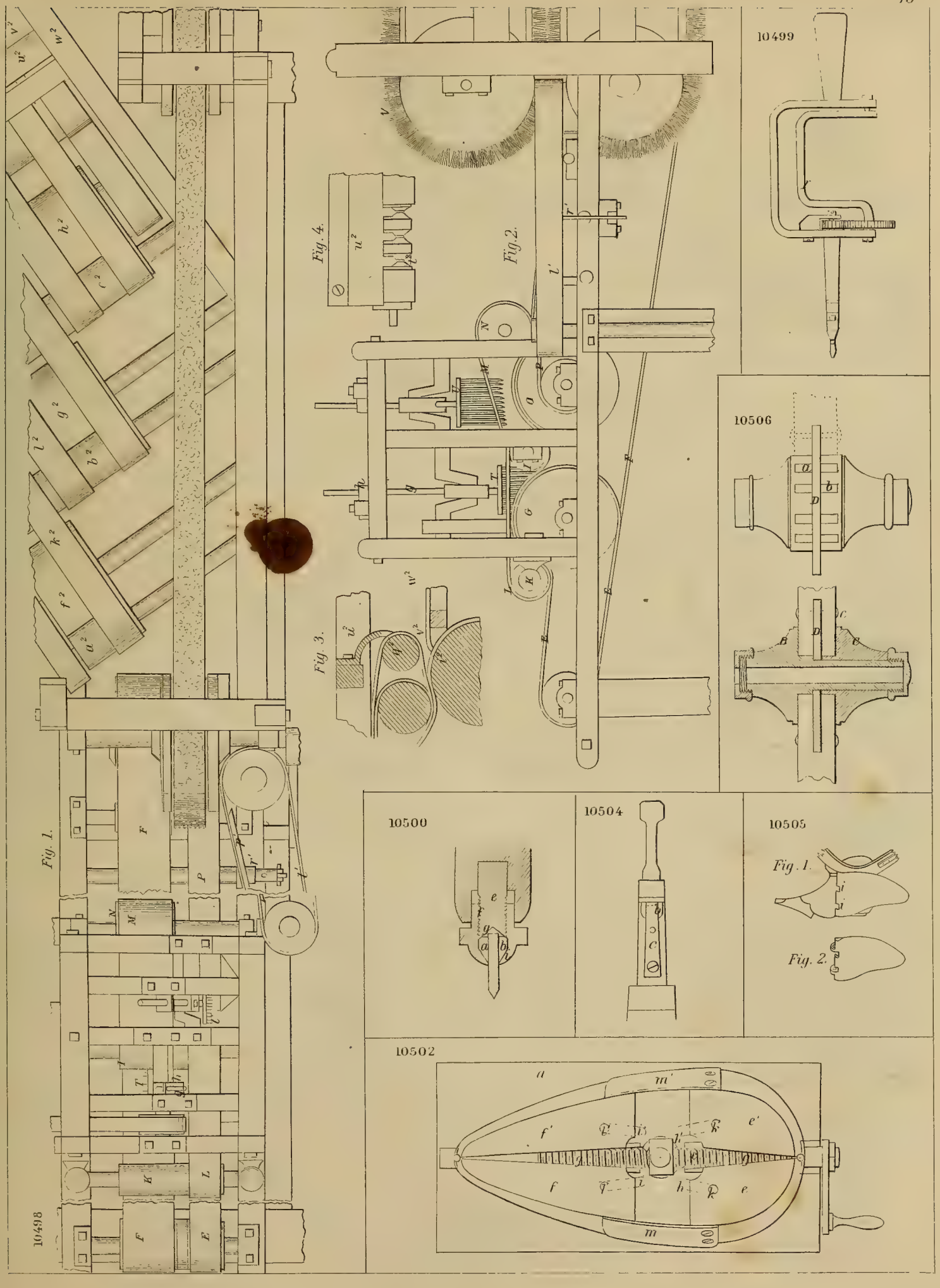
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Fig. 1.
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Fig. 3.
Fig. 4.
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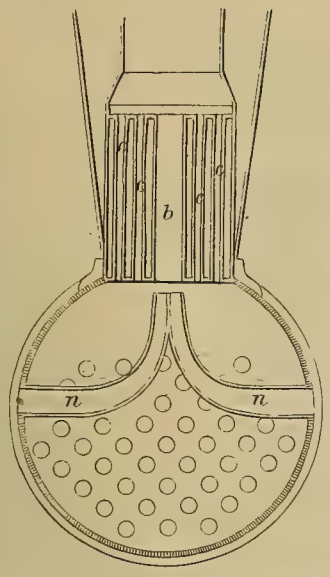

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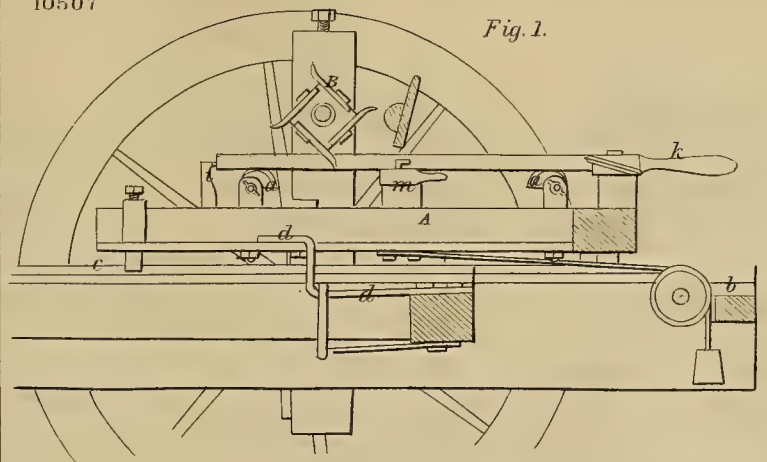

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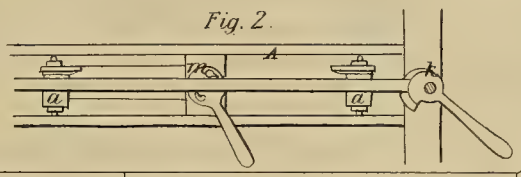

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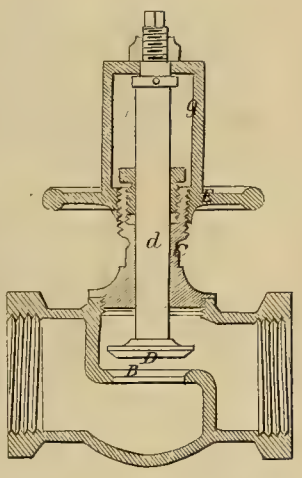

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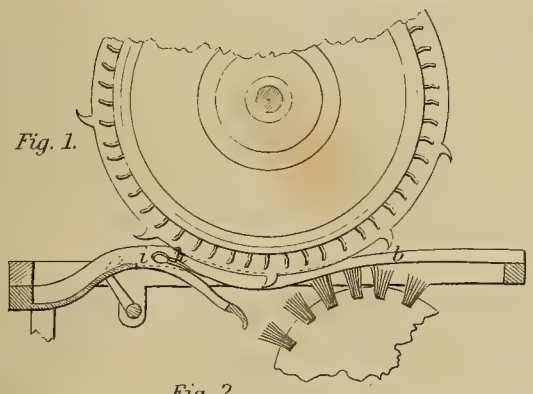

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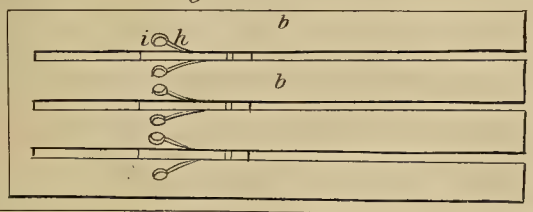

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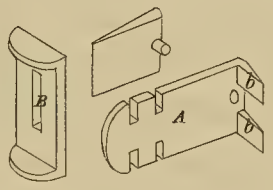

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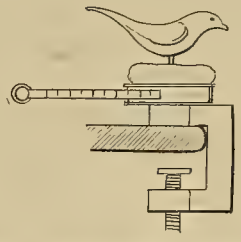

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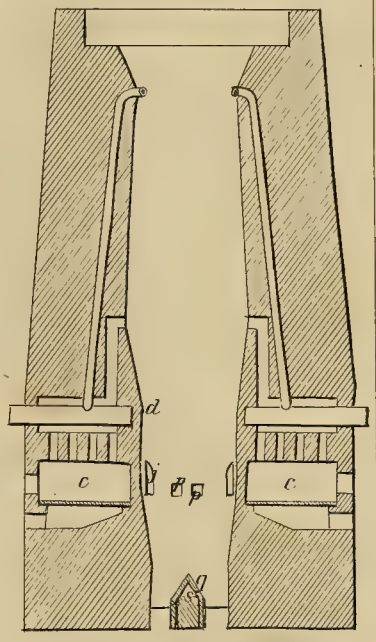

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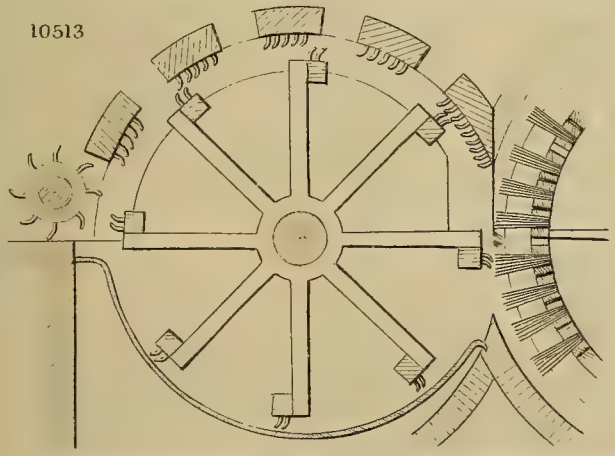

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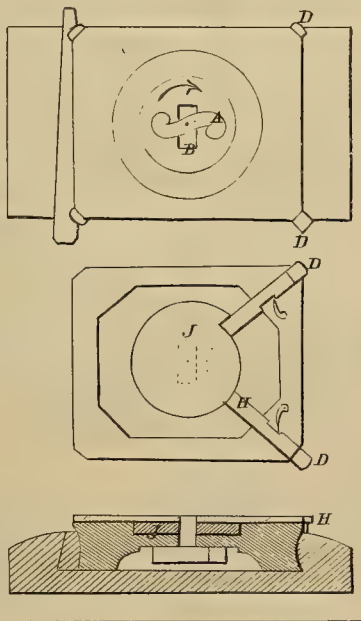

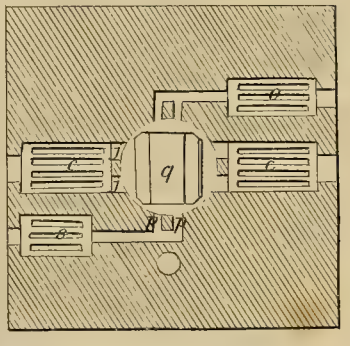

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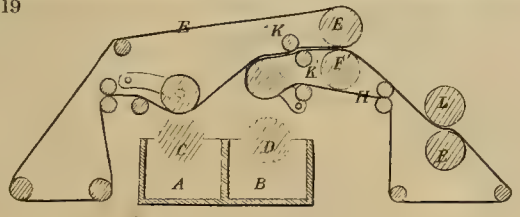

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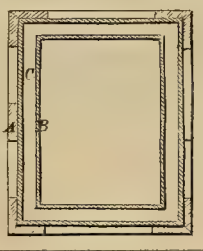

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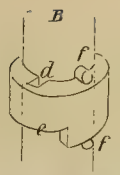

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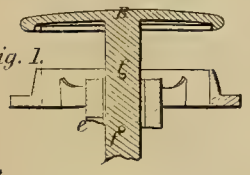

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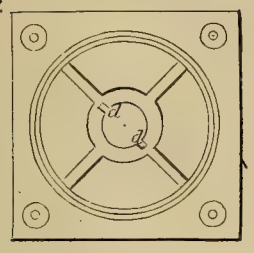

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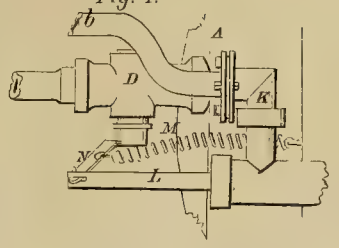

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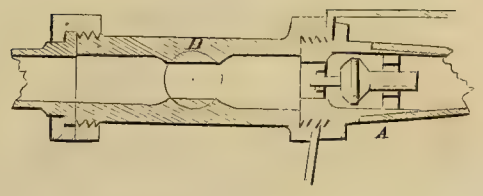

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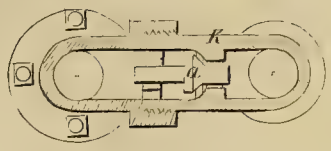

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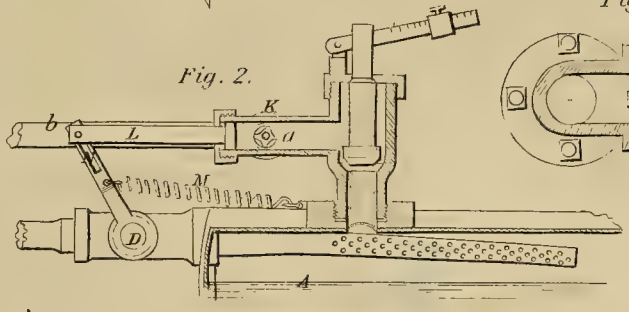

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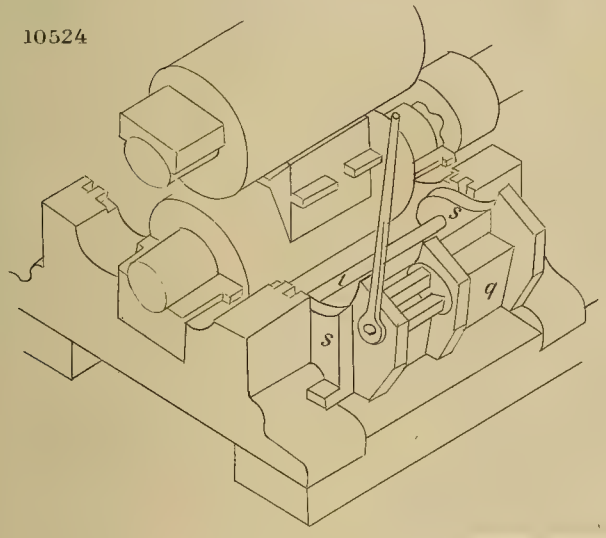

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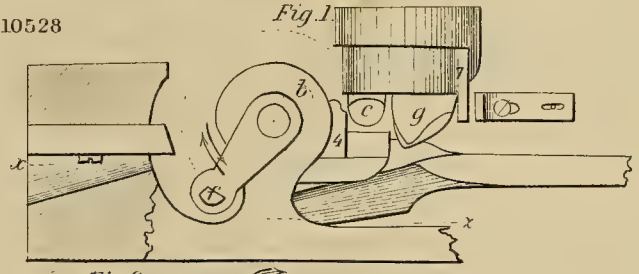
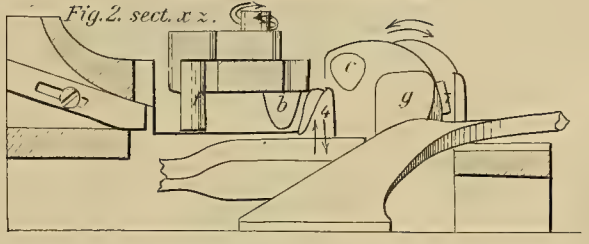


Fig. 2. sect. x z.



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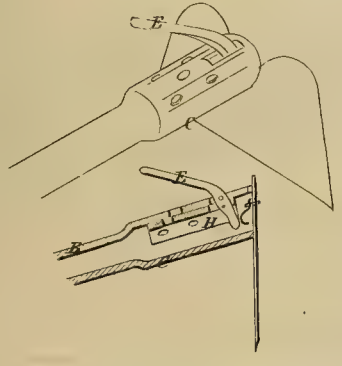

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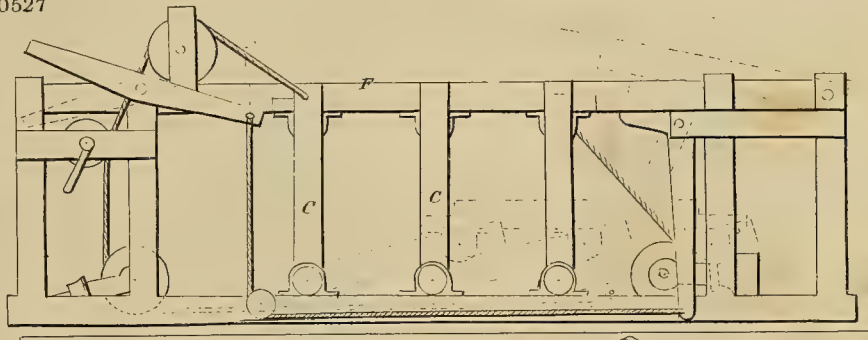

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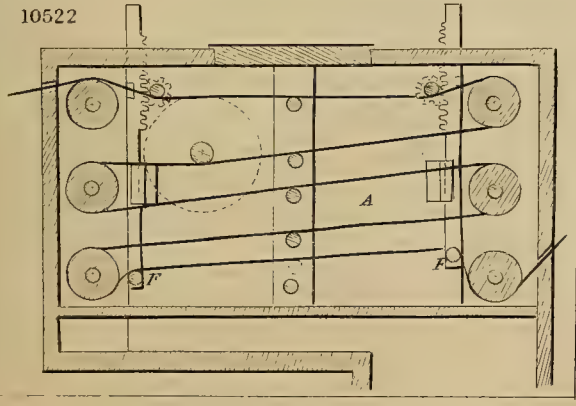

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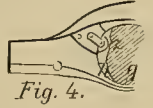

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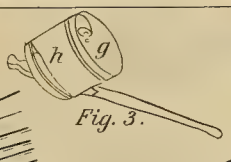

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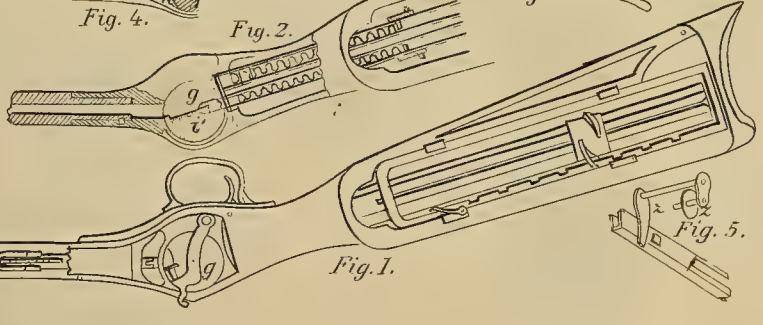

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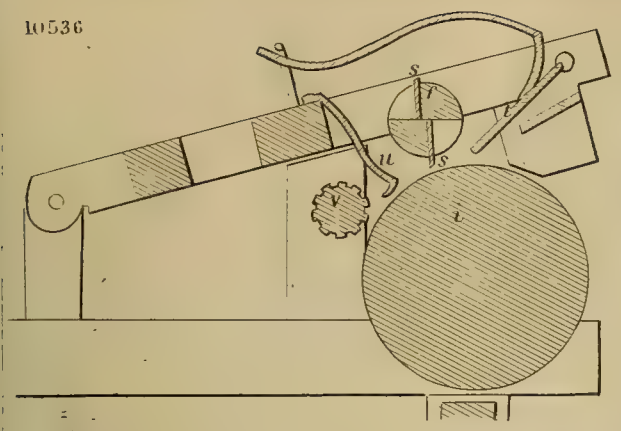

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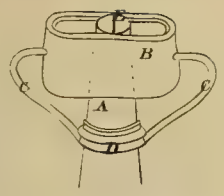

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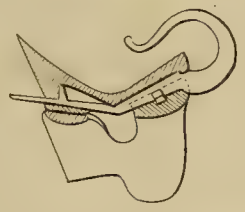

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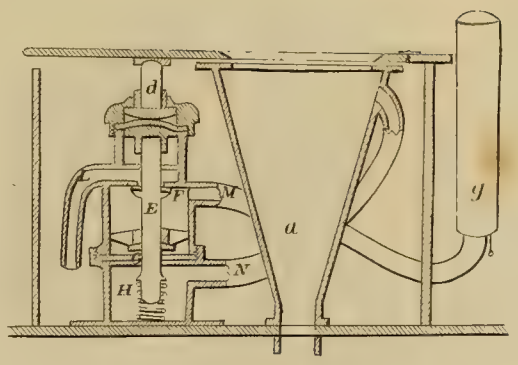

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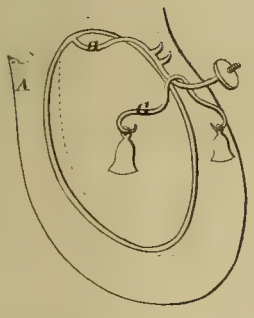

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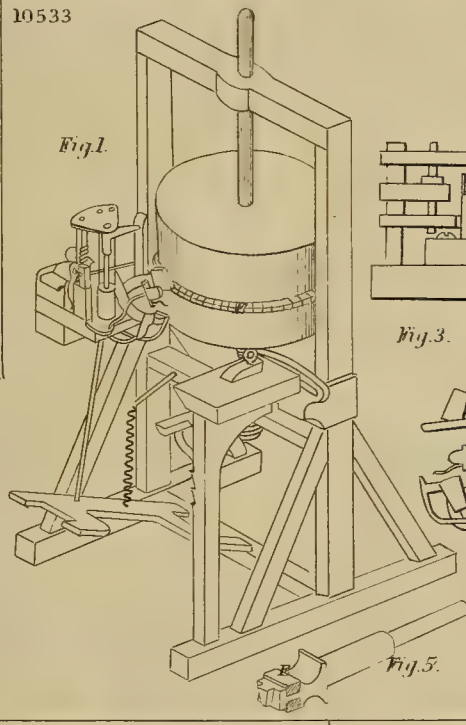

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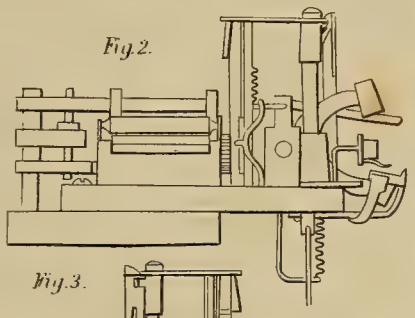

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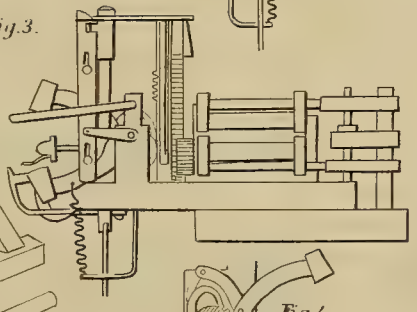

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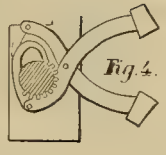

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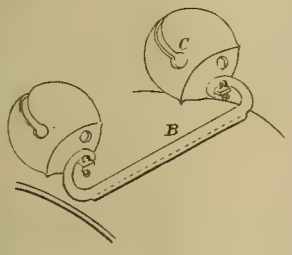

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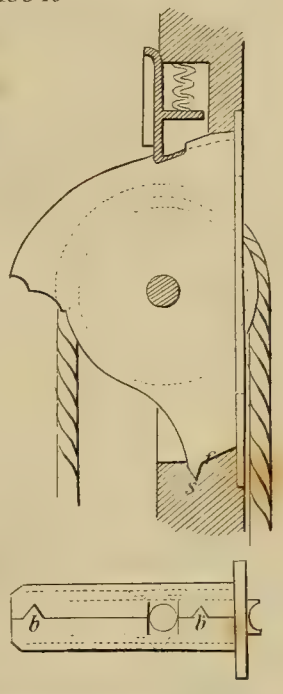

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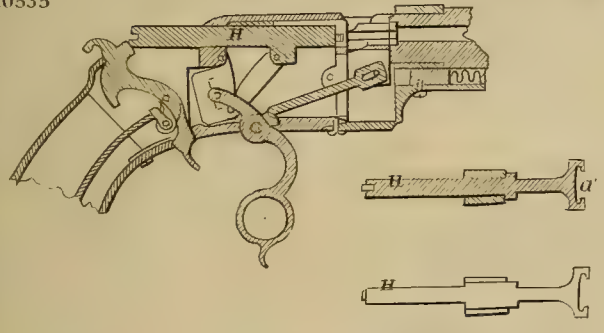

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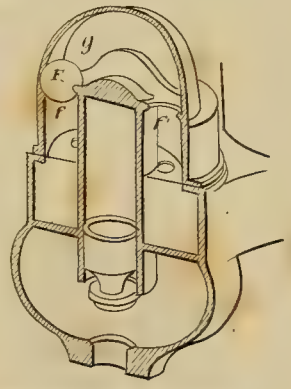

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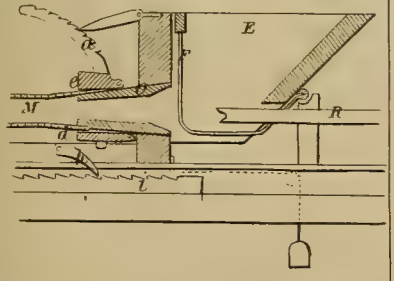

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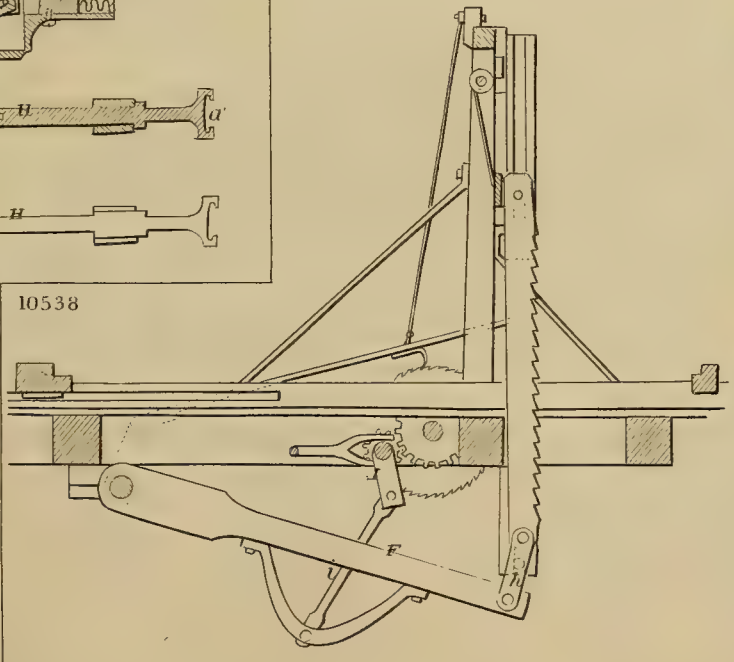

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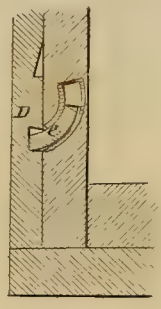

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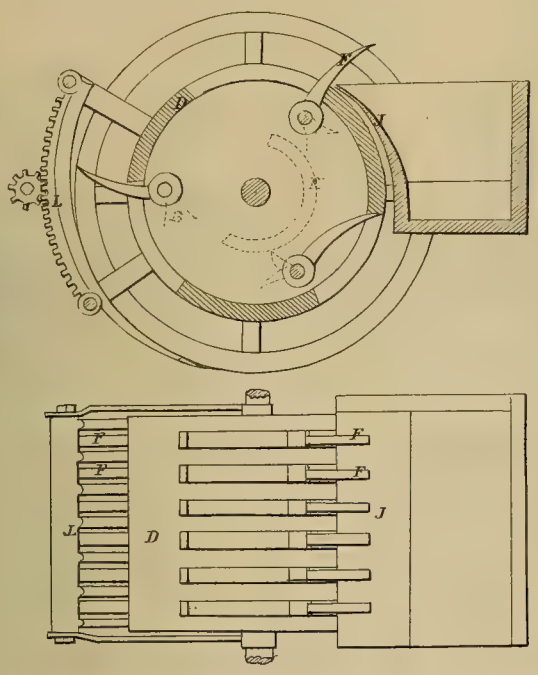

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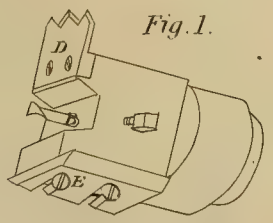

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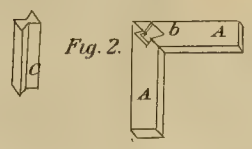

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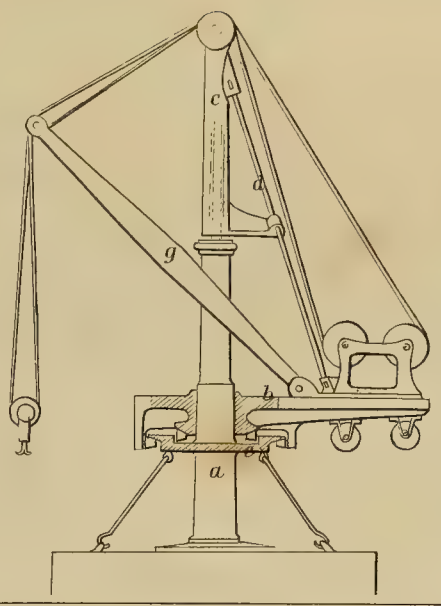

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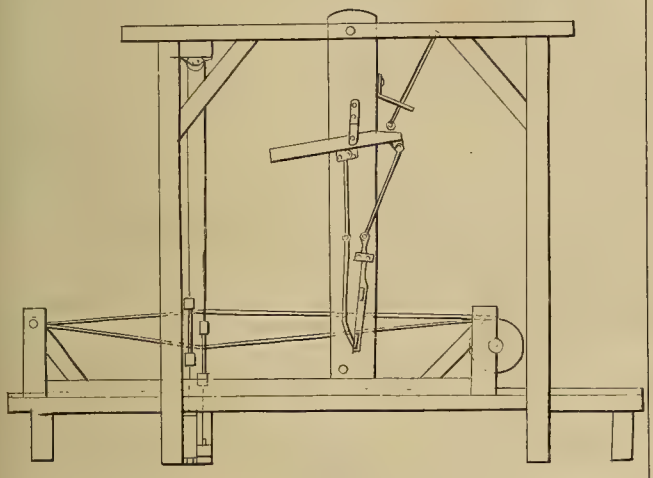

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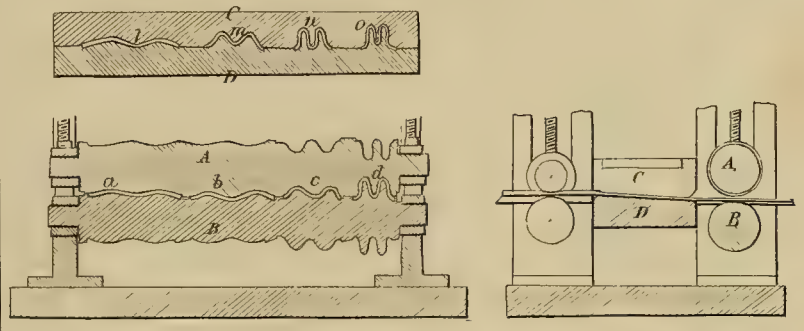

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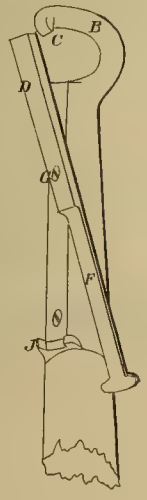

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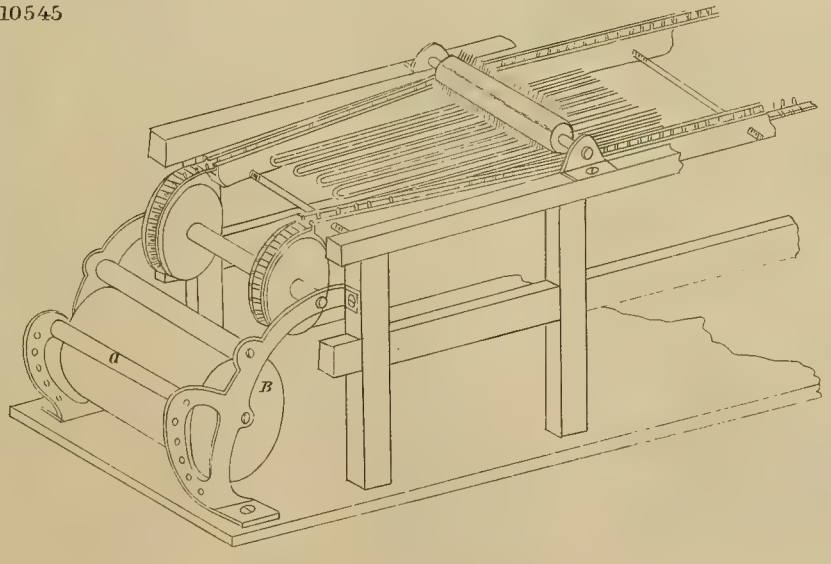

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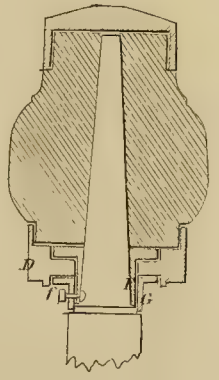

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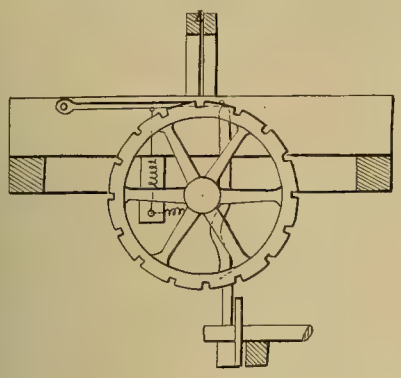

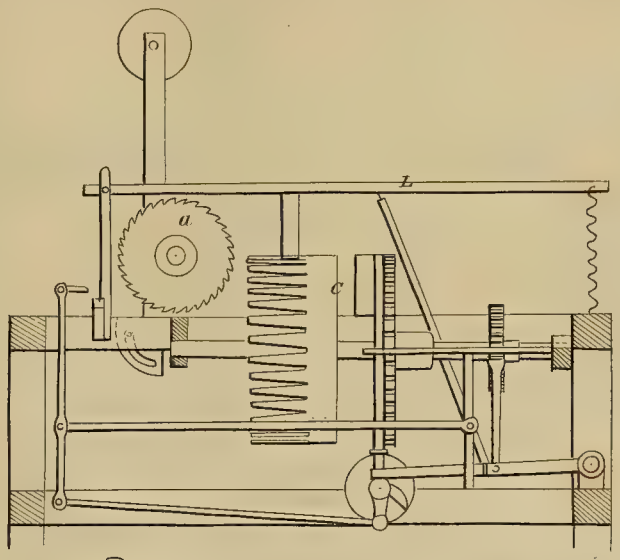

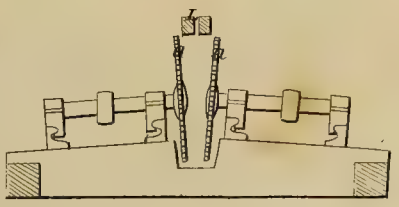

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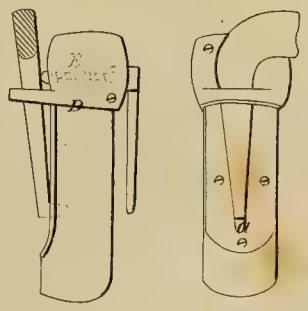

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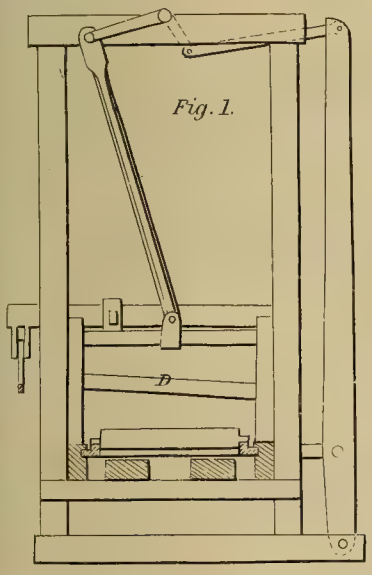

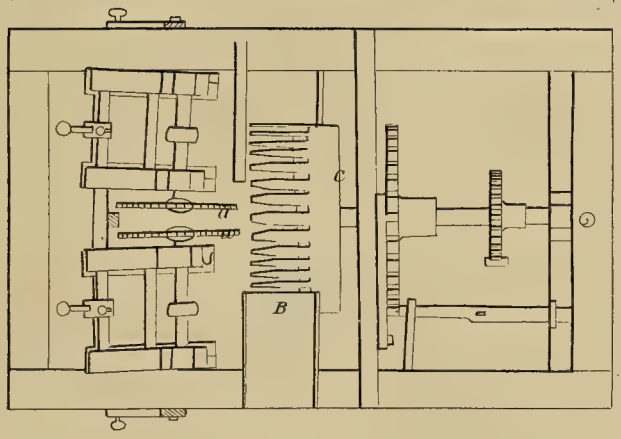

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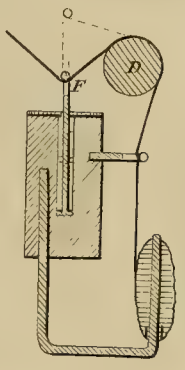

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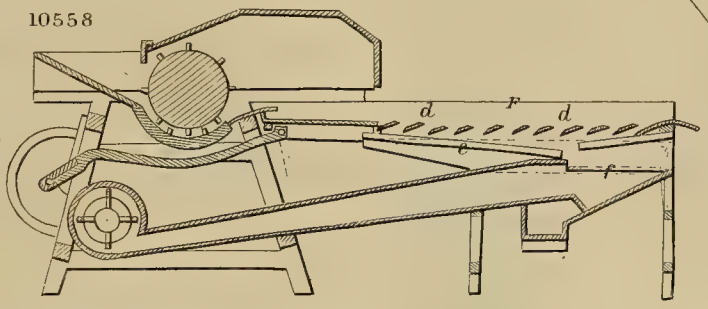

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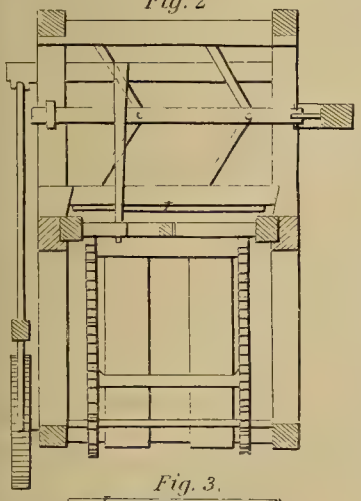

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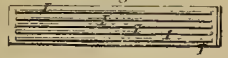

Fig 2

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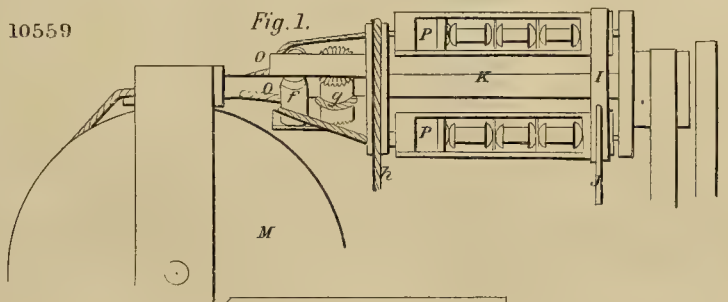

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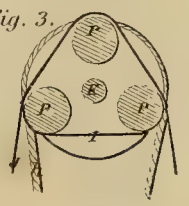

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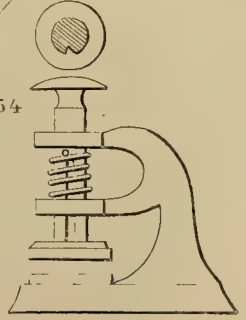

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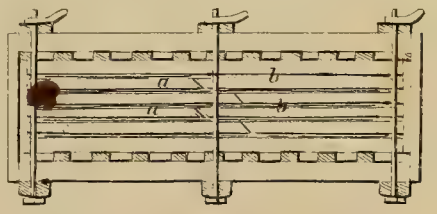

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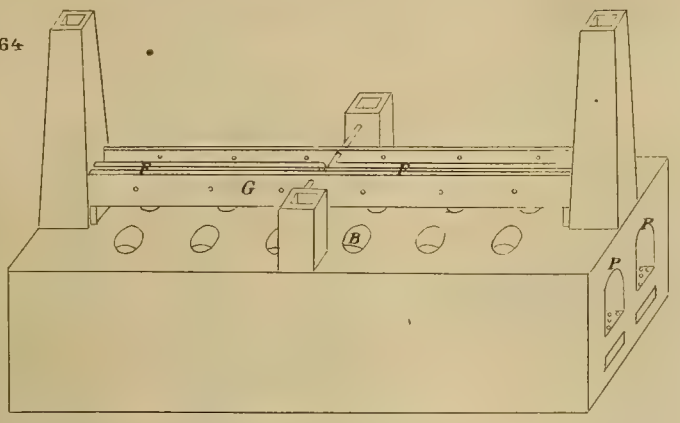

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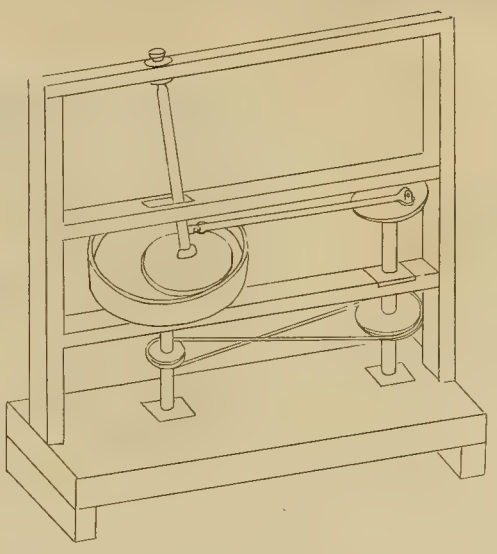

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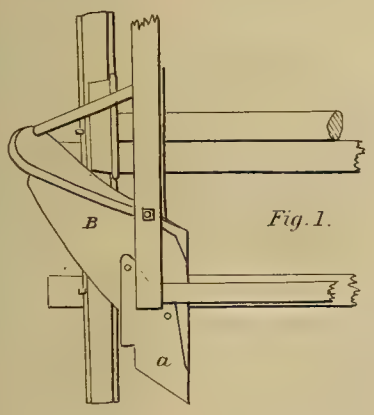

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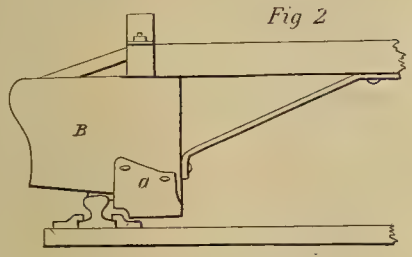

Fig 2

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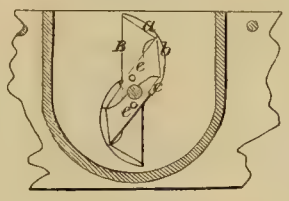

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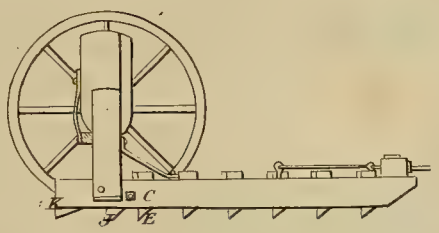

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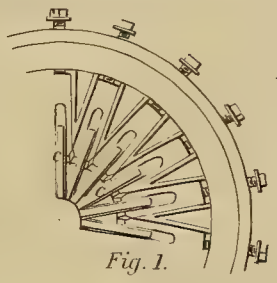

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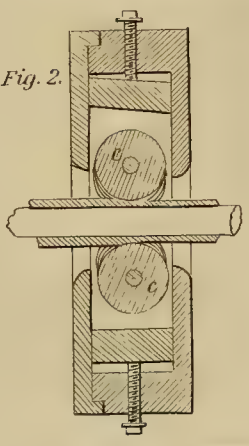

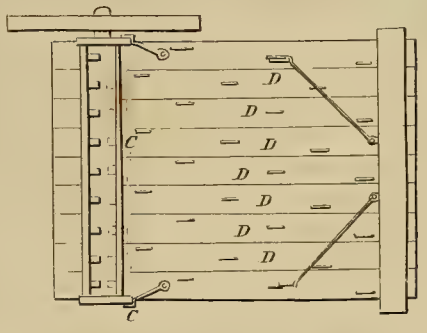

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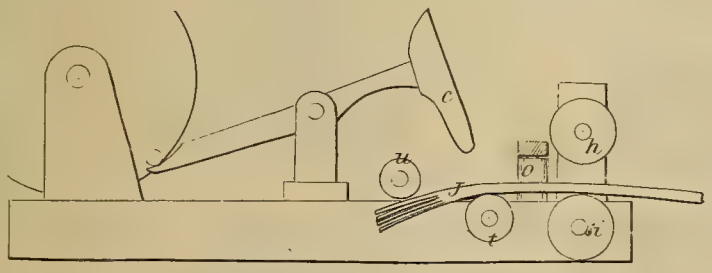

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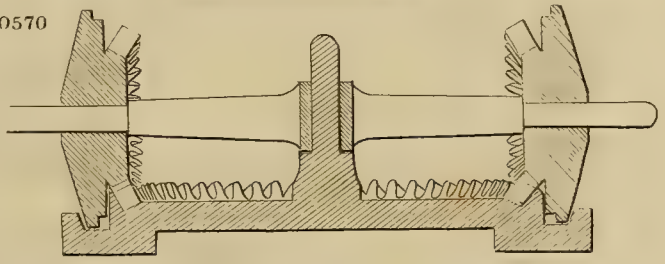

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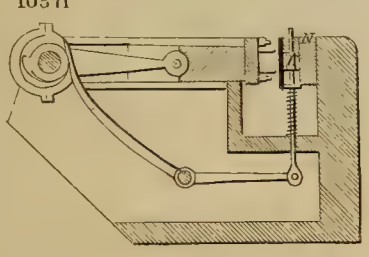

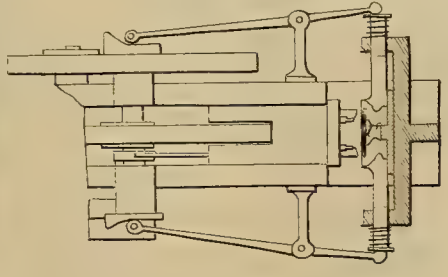

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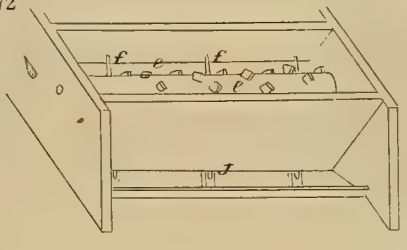

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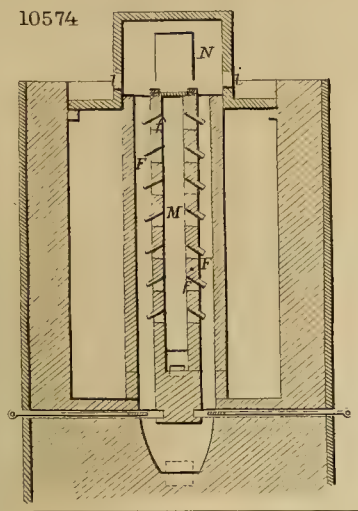

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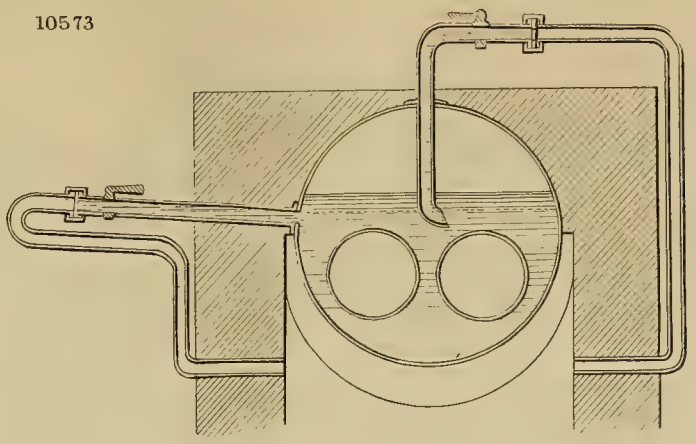

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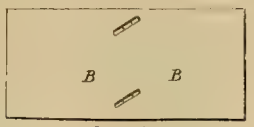

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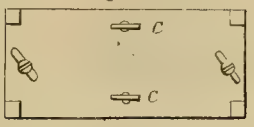

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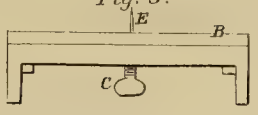

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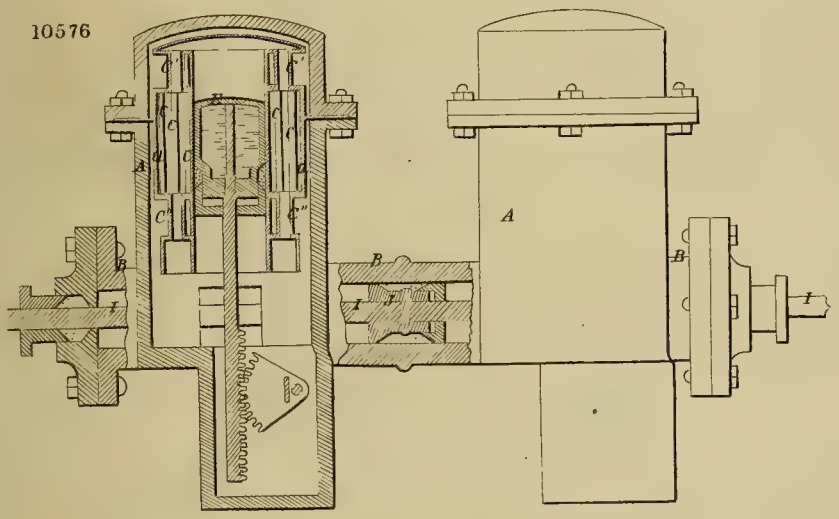

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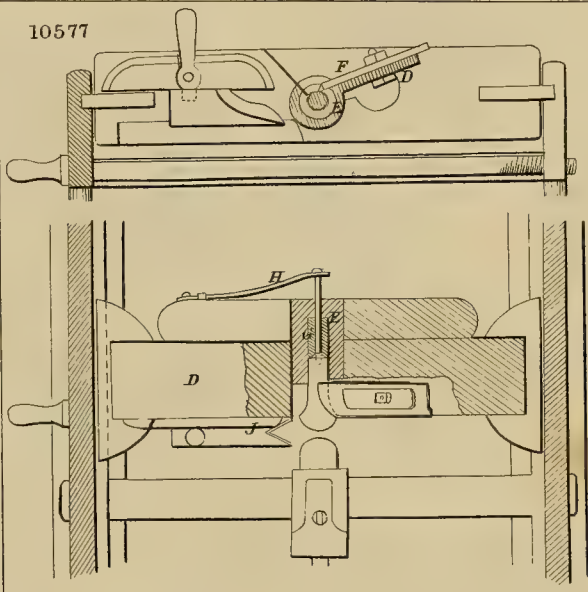

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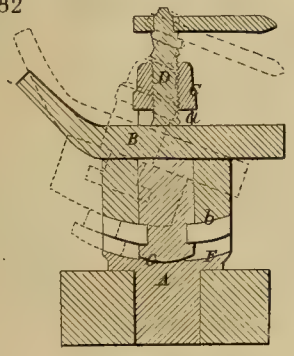

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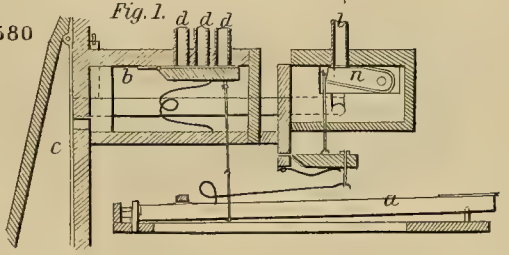

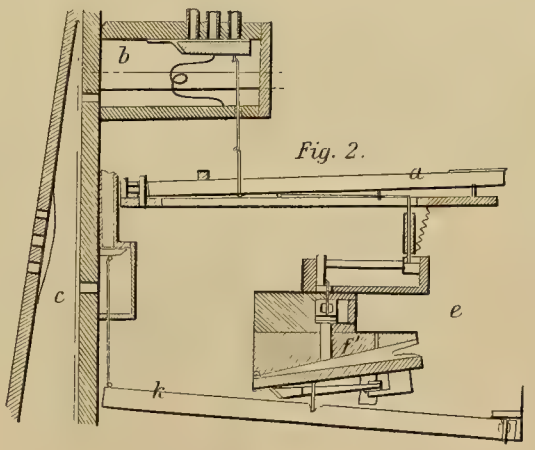

Fig. 2.

Fig. 3.

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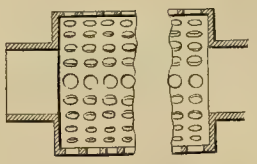

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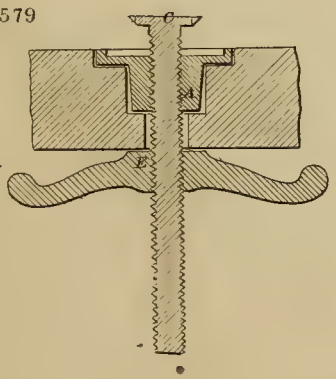

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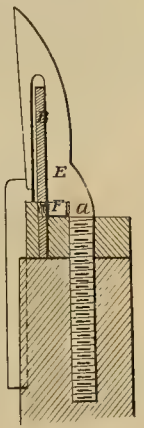

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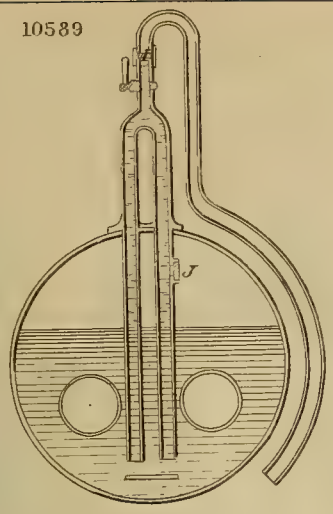

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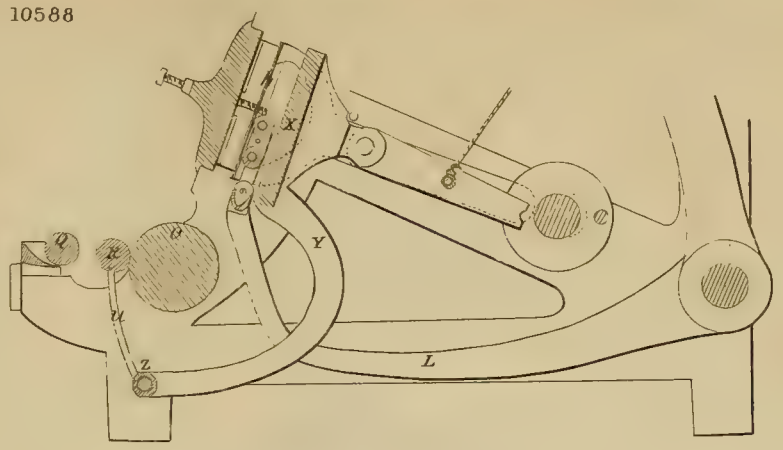

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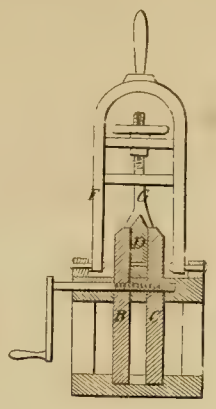

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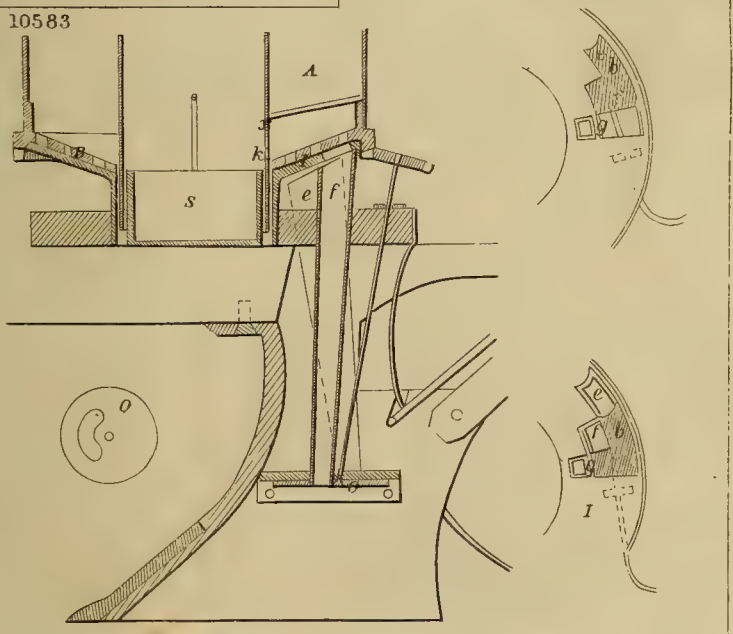

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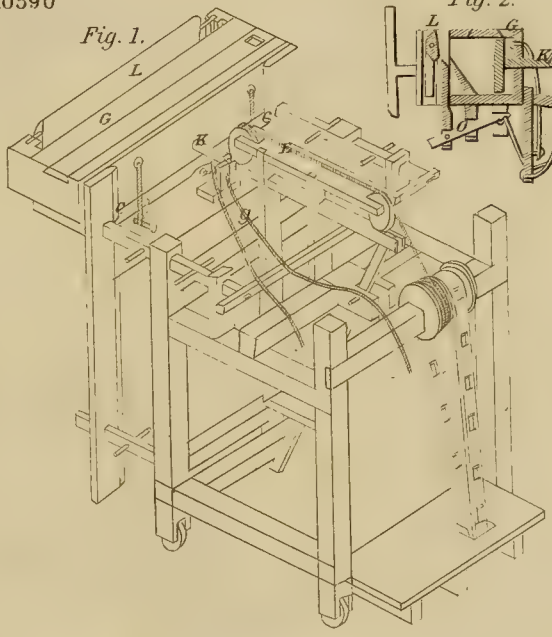

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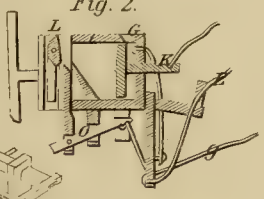

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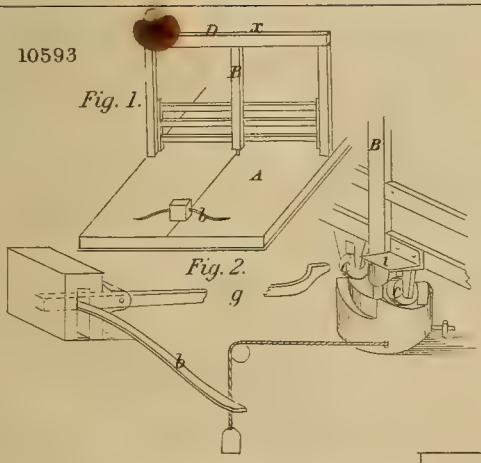

Fig. 2.

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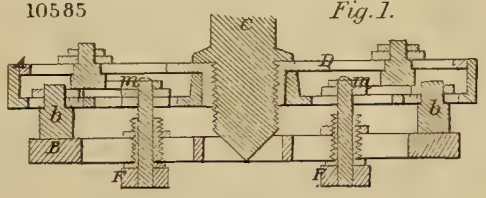

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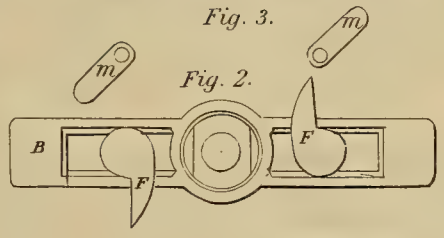

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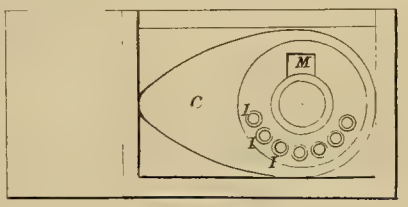

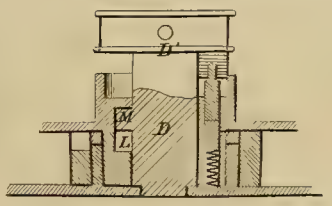

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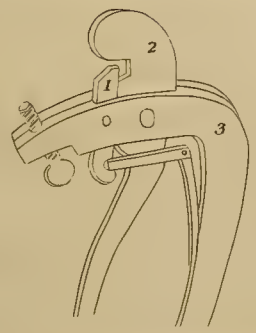

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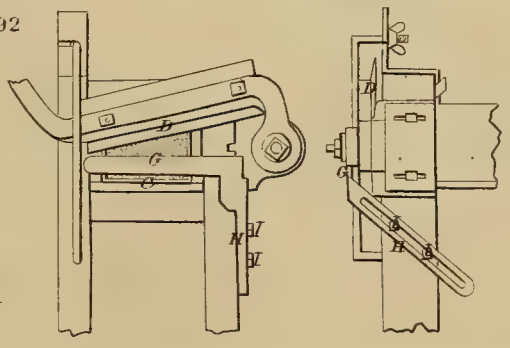

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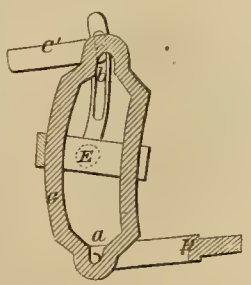

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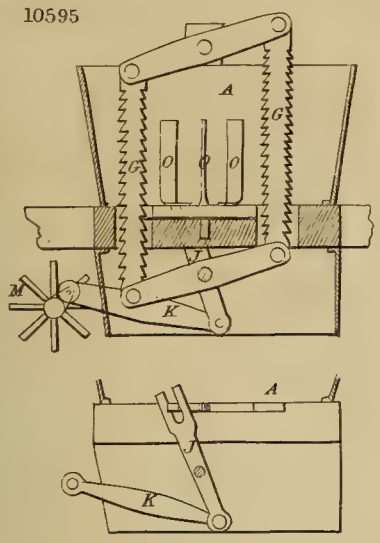

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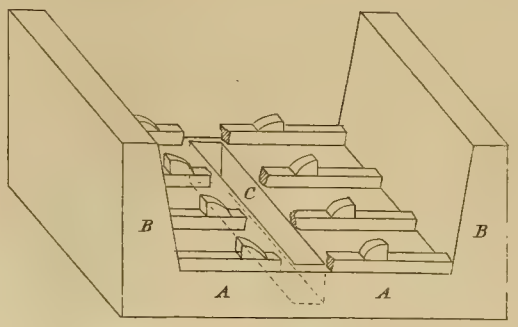

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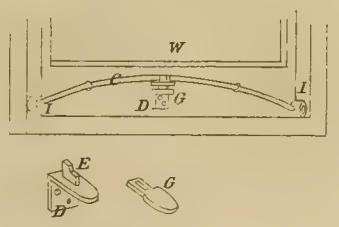

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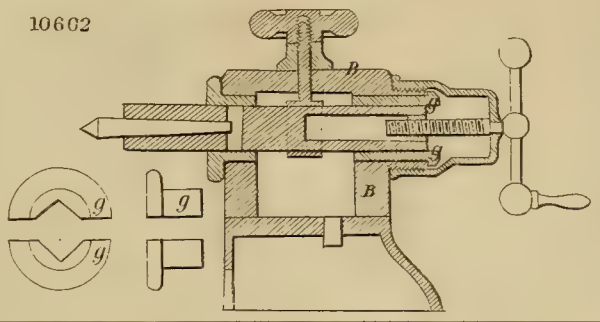

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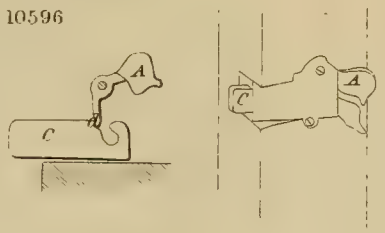

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Fig. 2

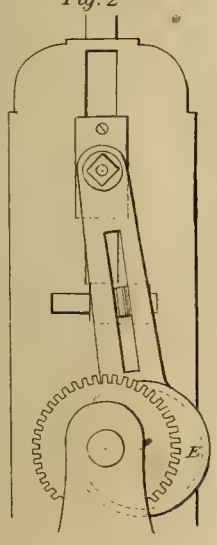
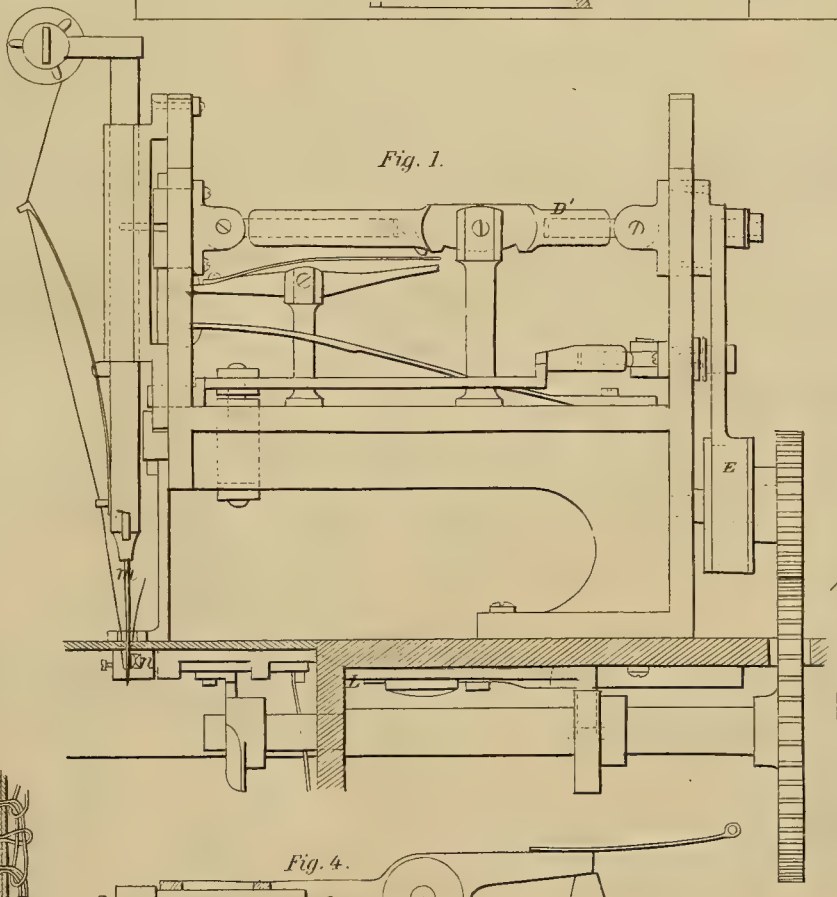


Fig. 1.



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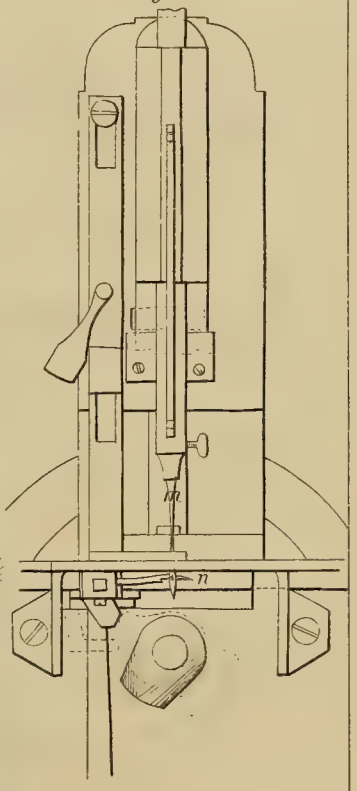

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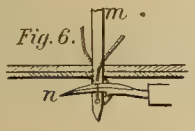

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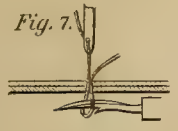

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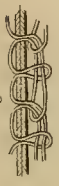

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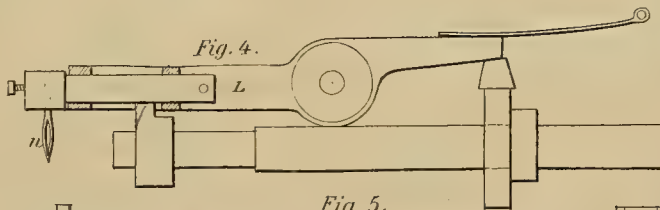

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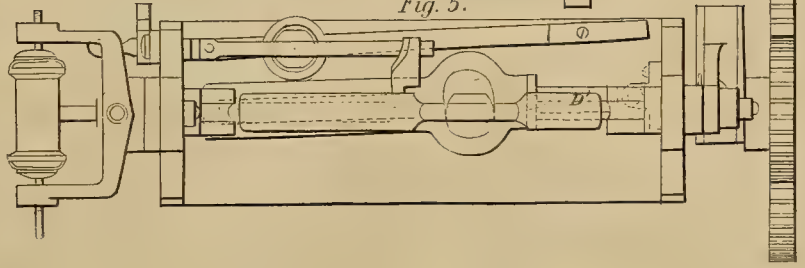

Fig. 9.

Fig. 10.

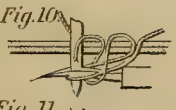

Fig. 11.

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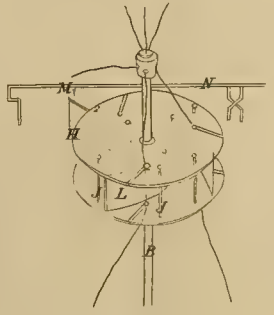

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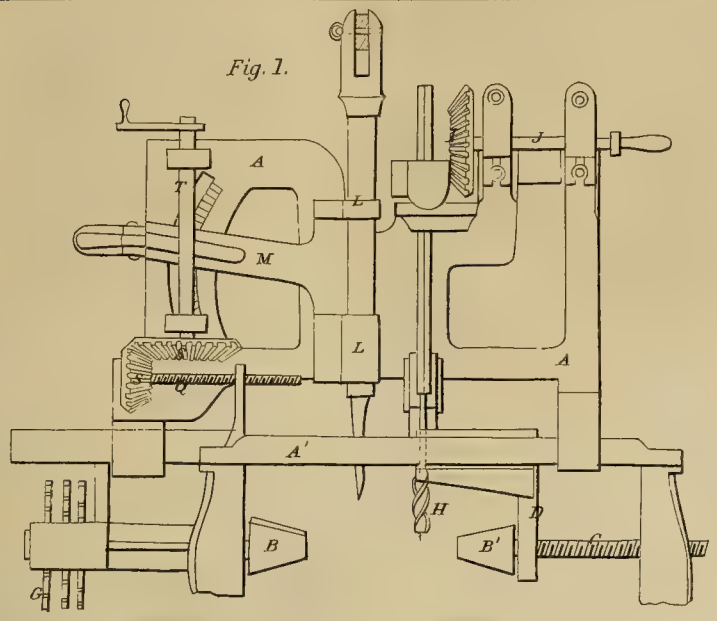

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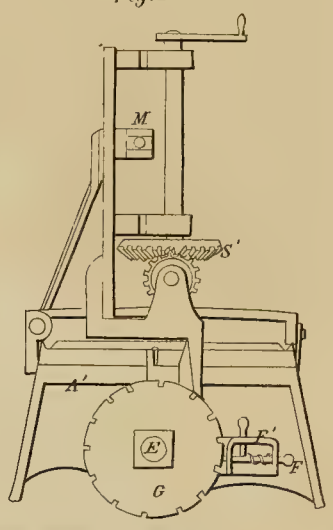

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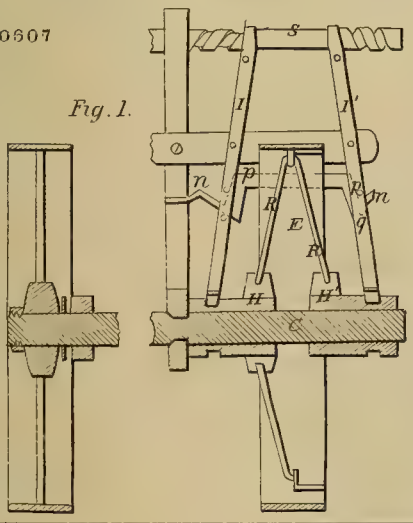

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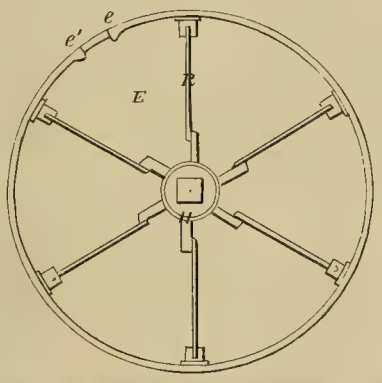

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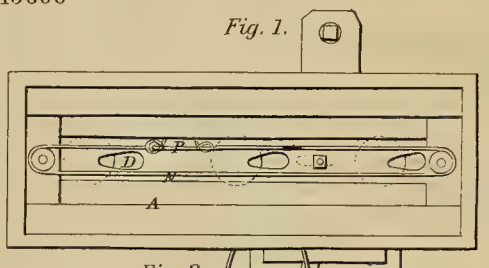

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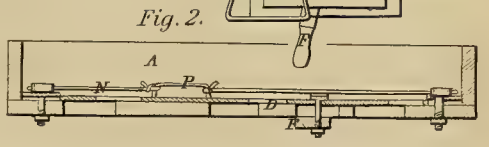

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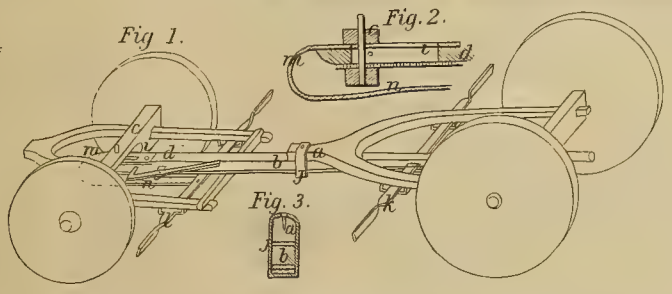
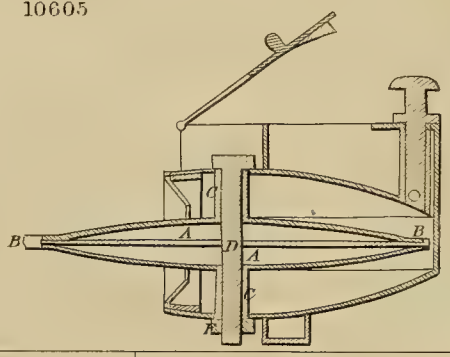


Fig. 2.

Fig. 3.

10605



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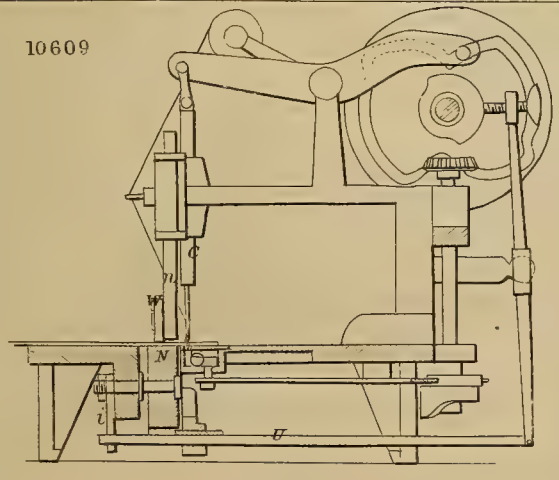

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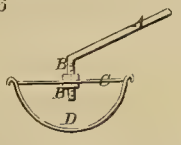

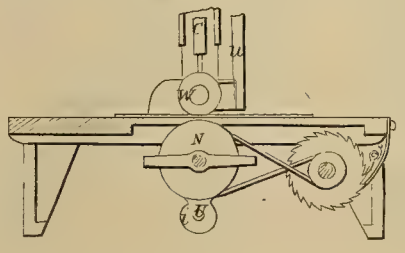

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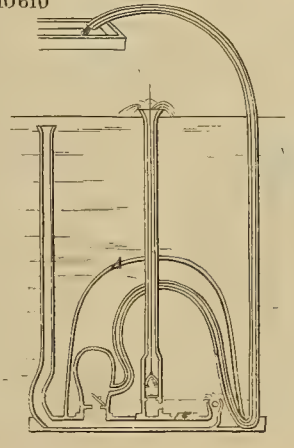

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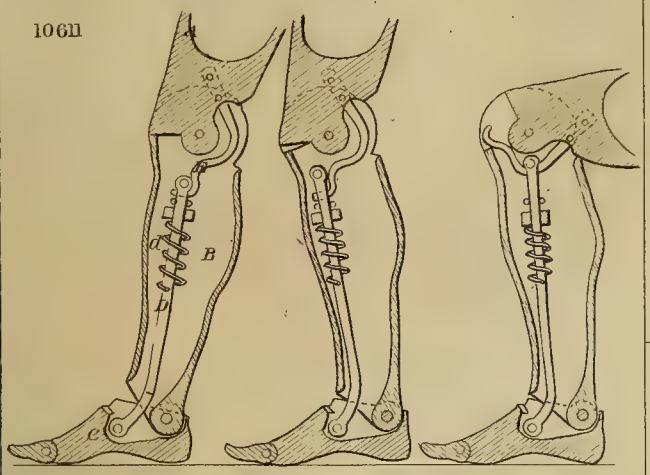

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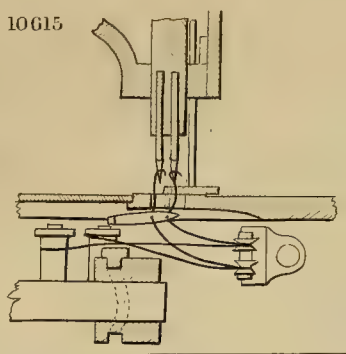

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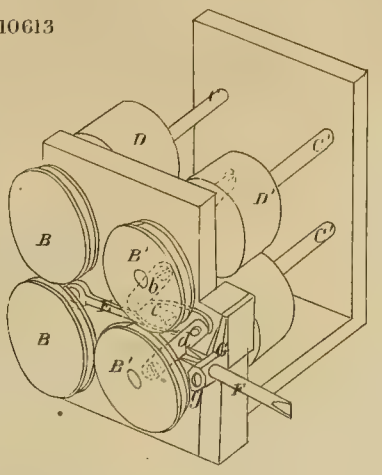

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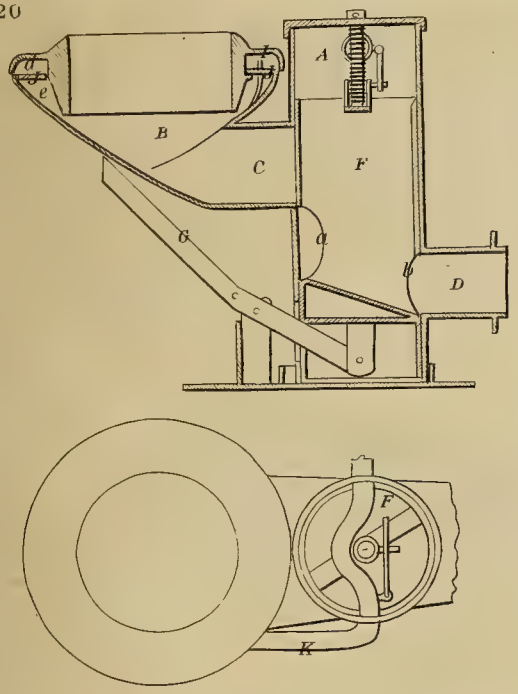

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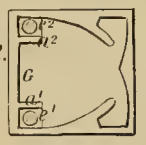

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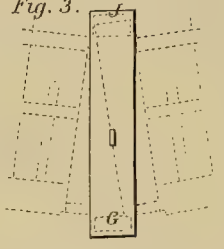

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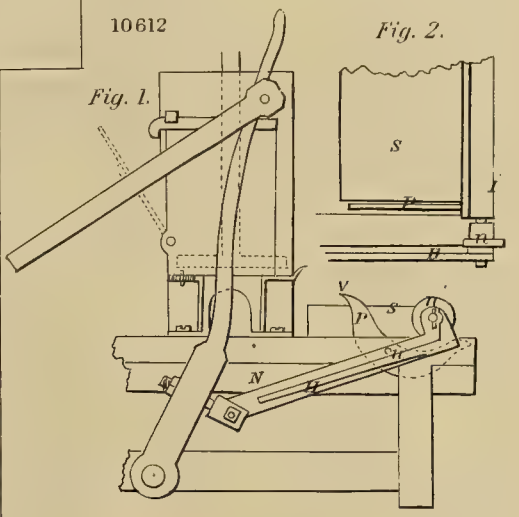

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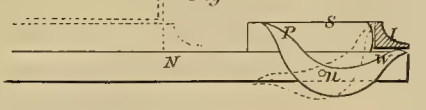

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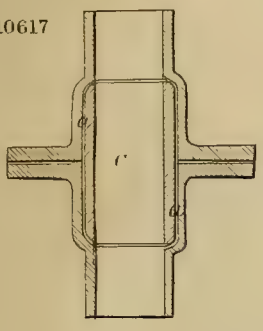

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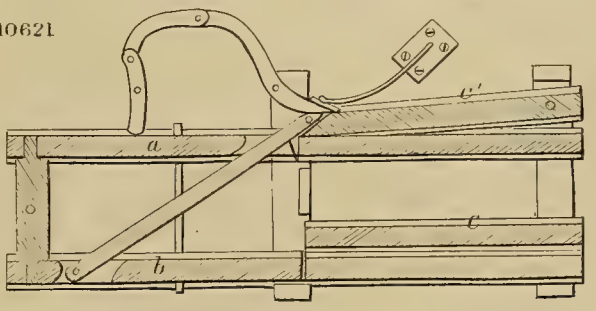

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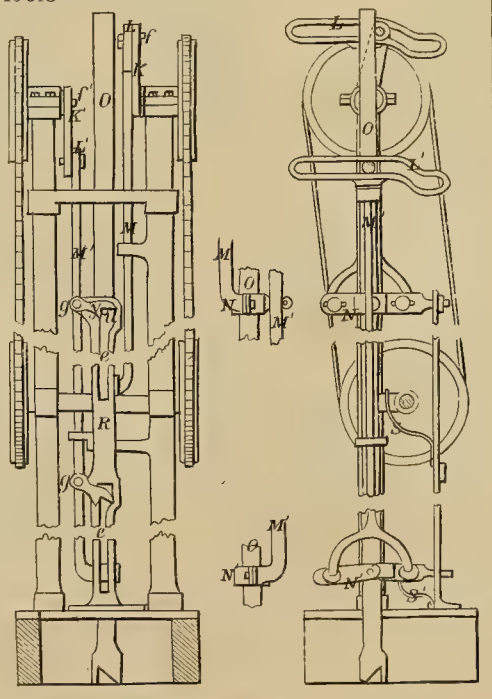

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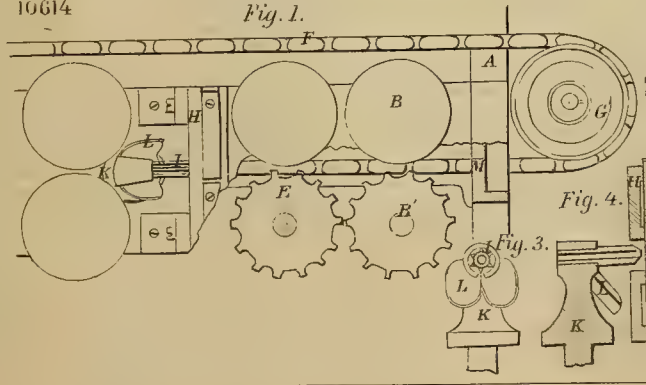

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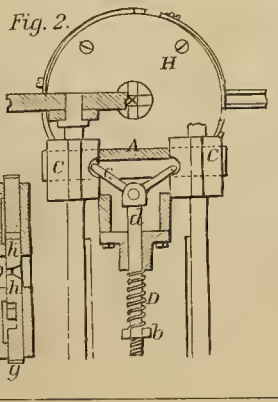

Fig. 3.

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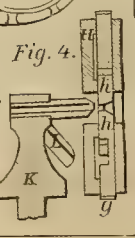

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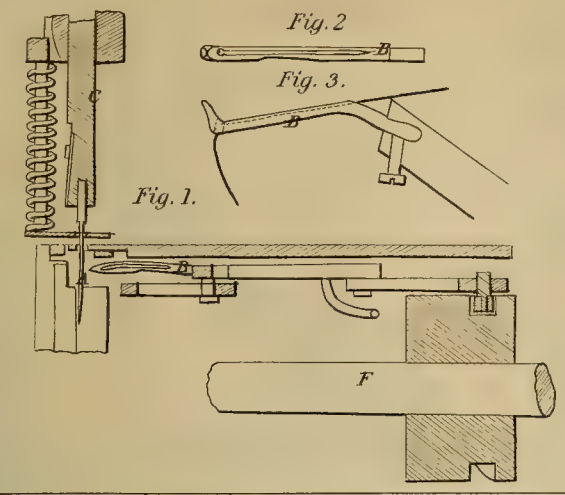

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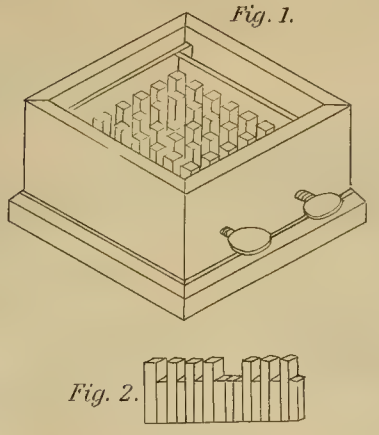

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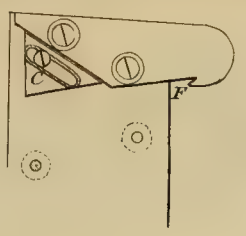

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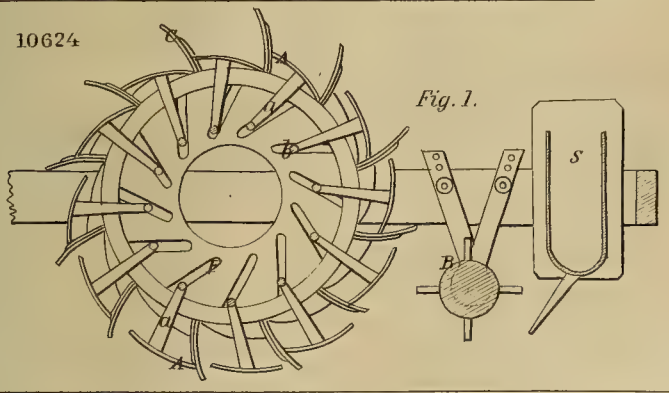

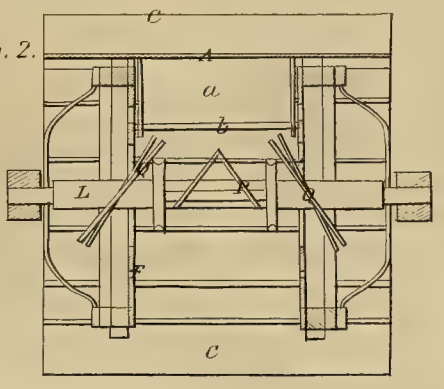

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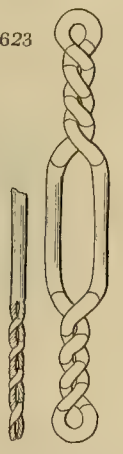

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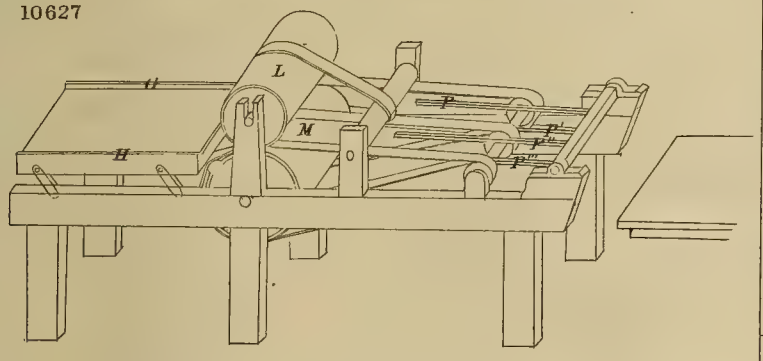

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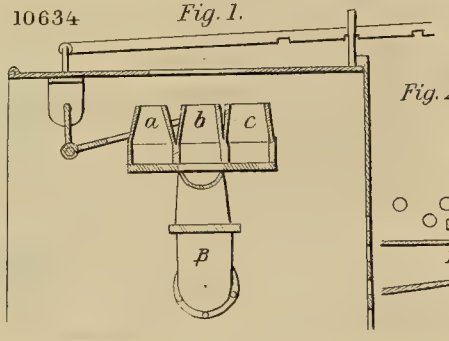

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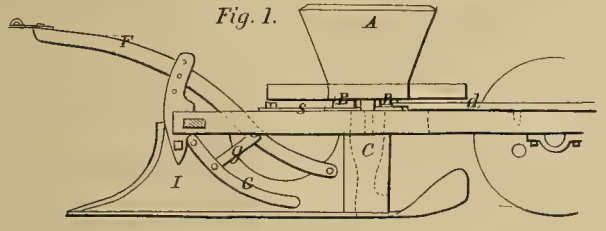

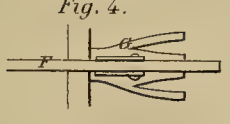

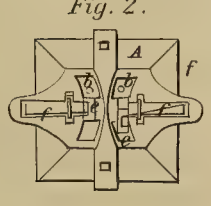

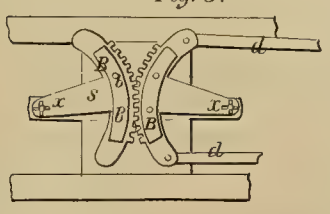

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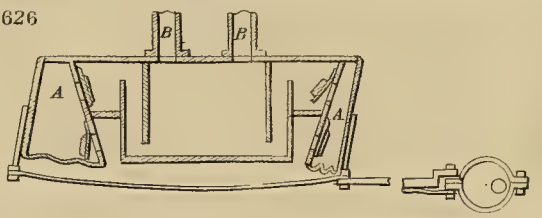

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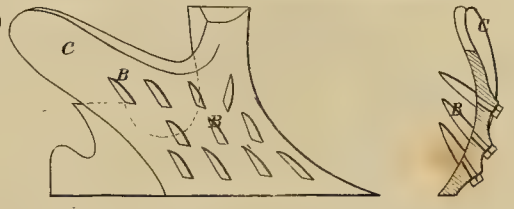

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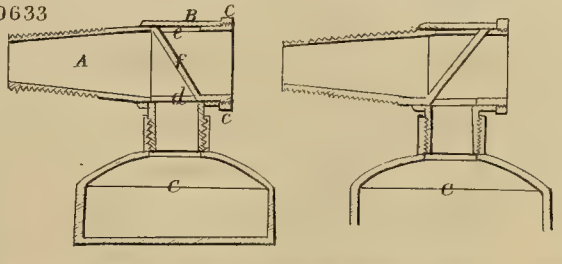

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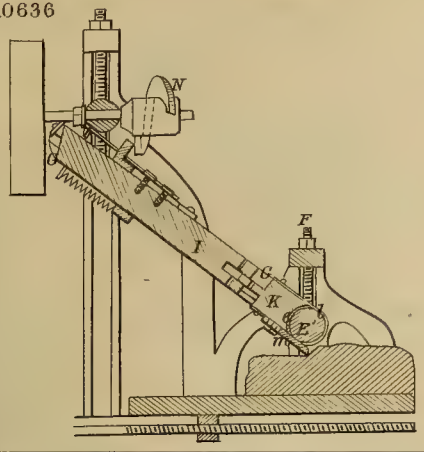

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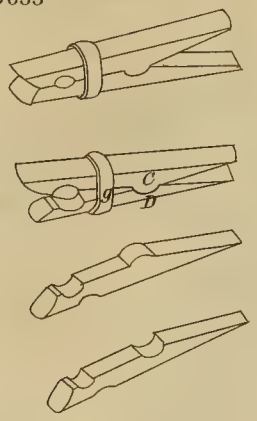

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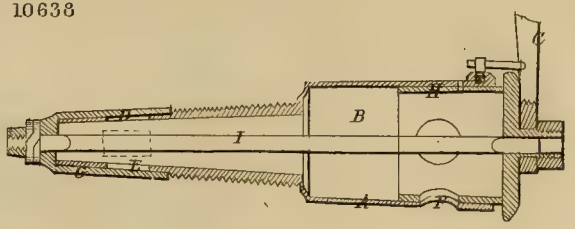

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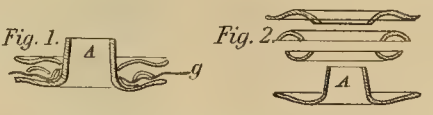

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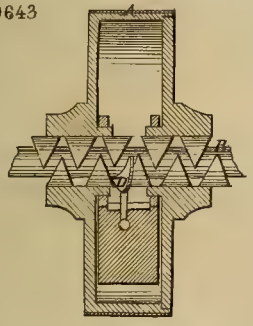

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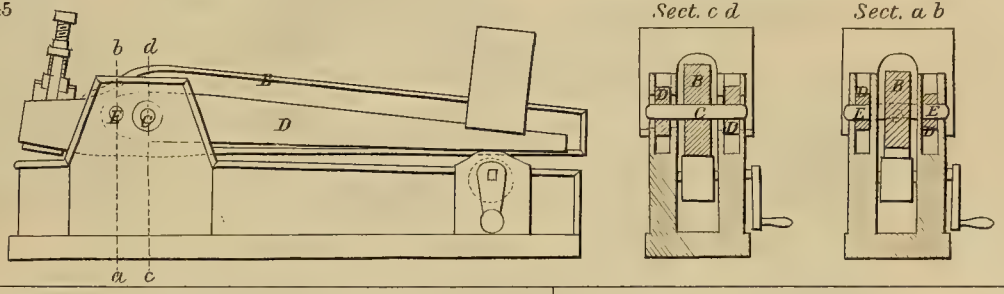

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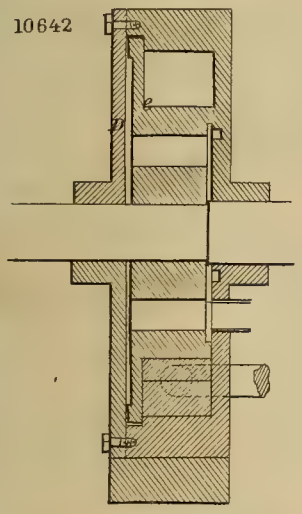

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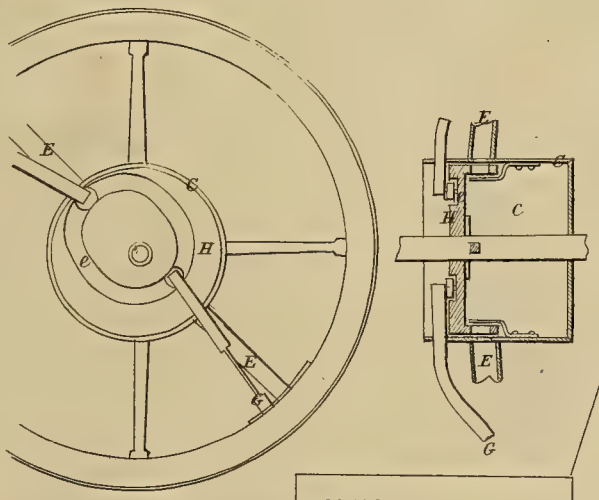

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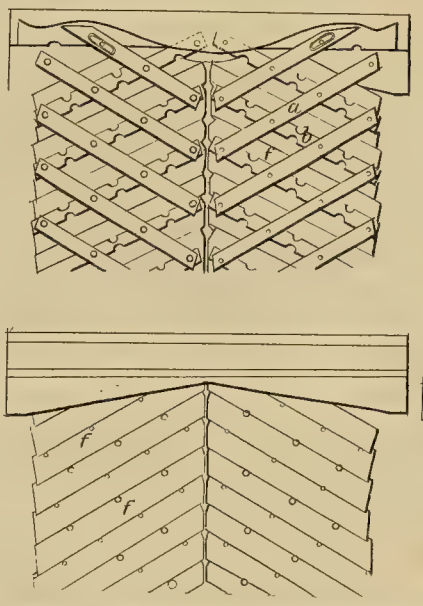

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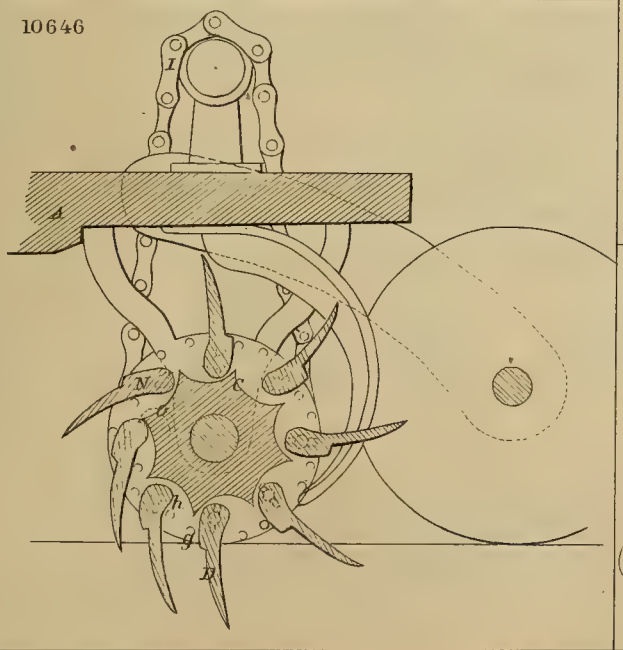

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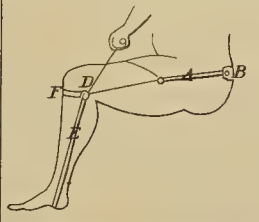

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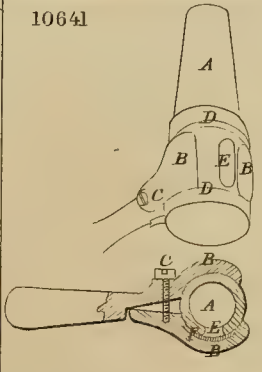

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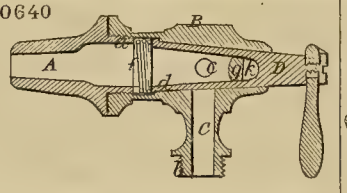

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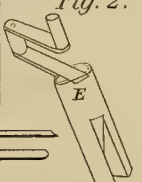

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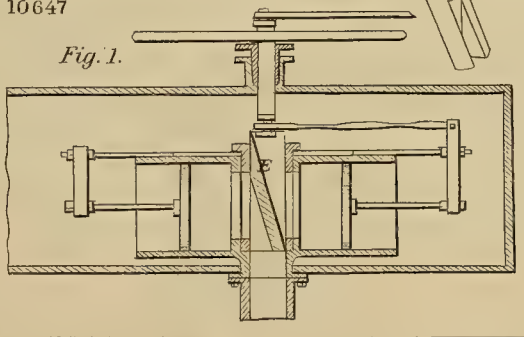

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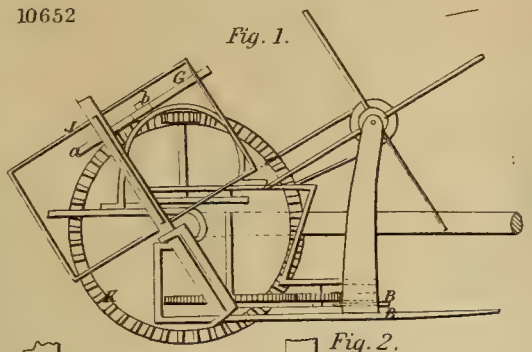

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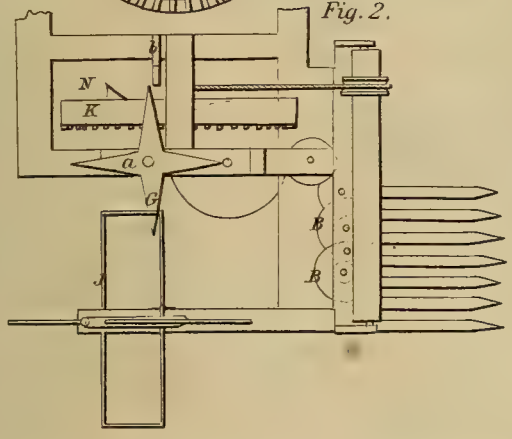

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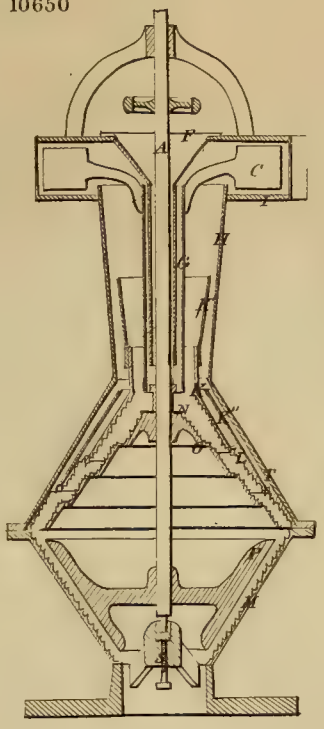

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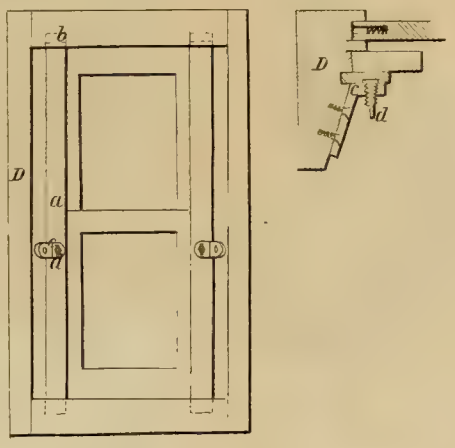

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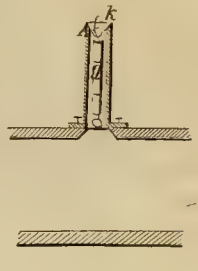

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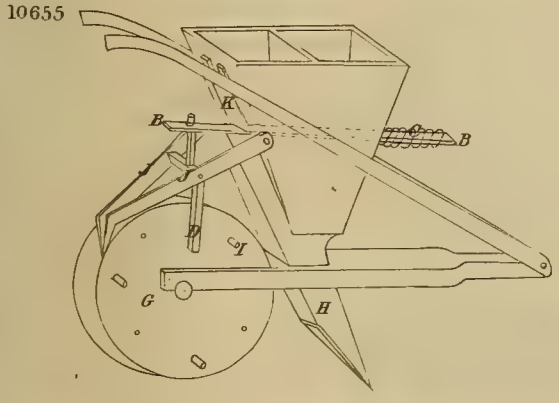

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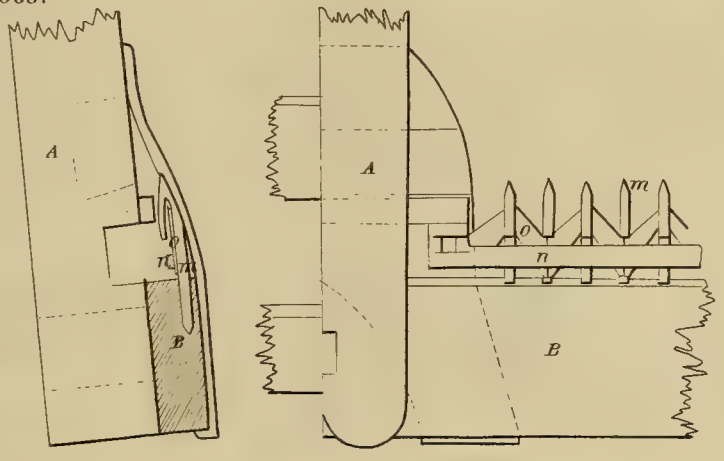

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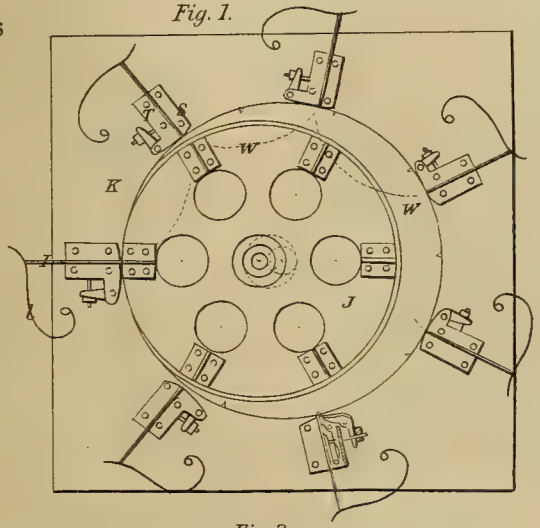
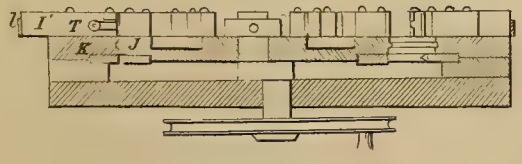


Fig. 2.



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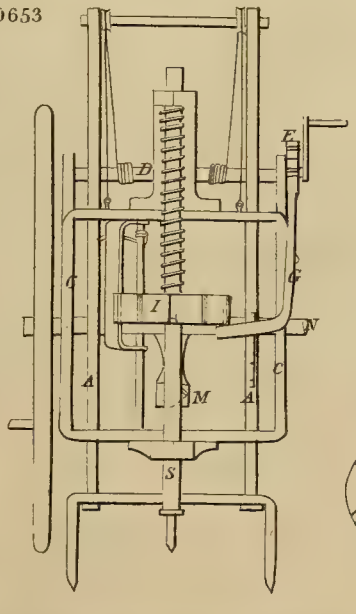

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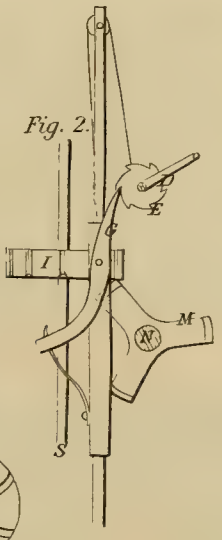

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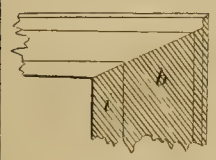

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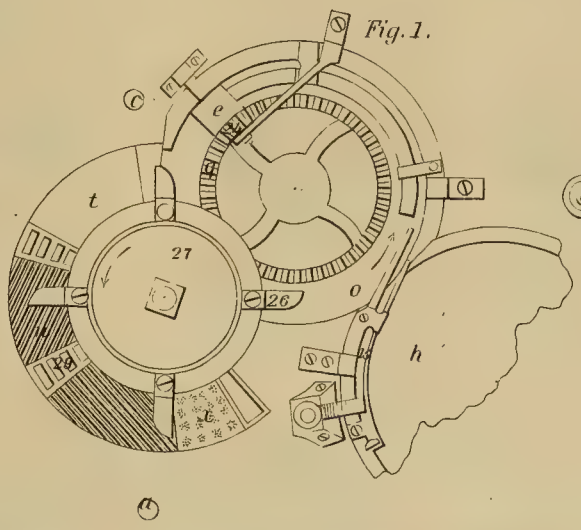

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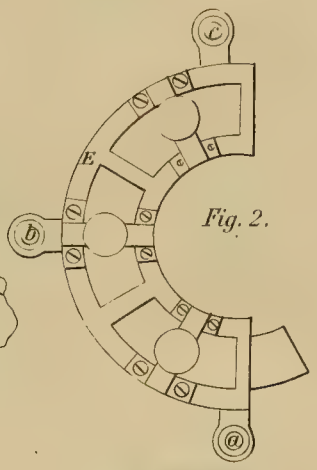

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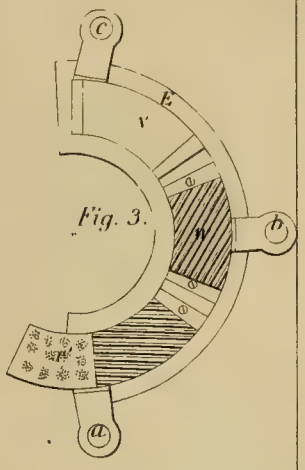

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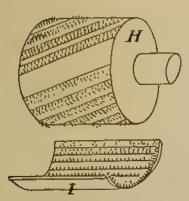

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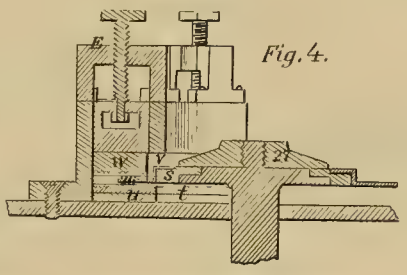

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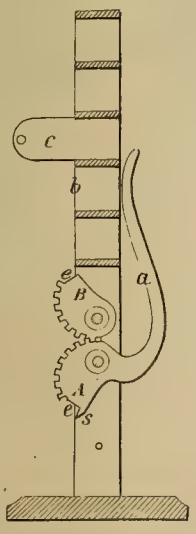

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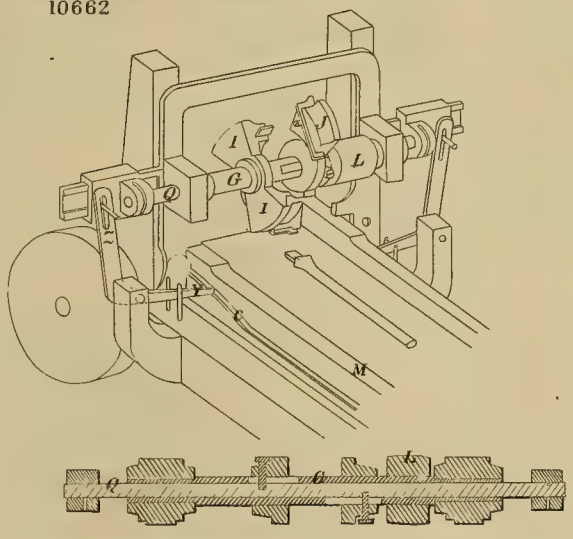

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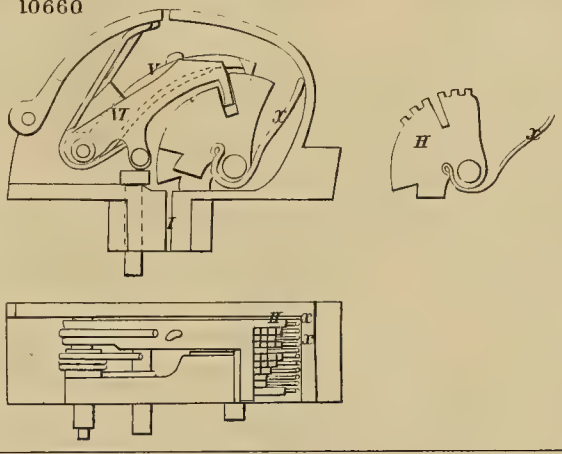

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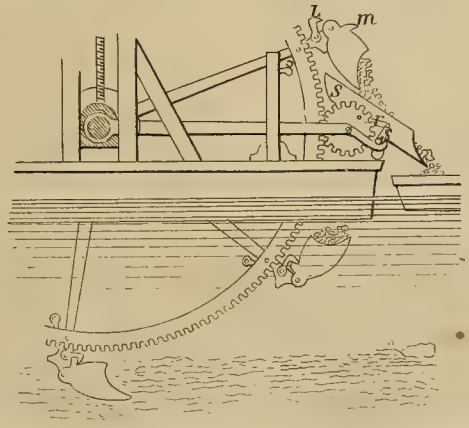

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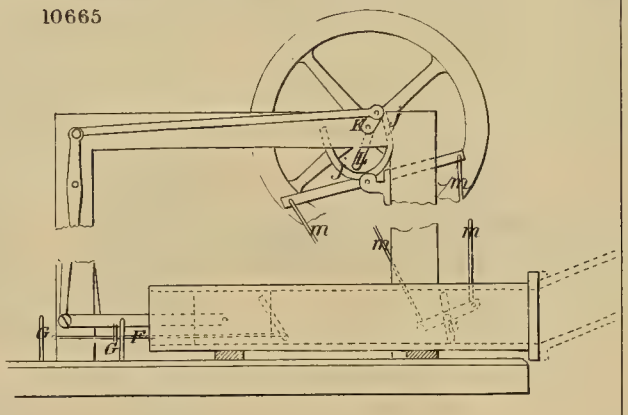

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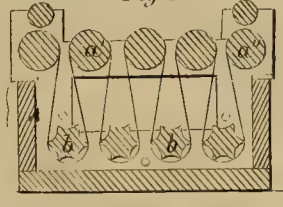

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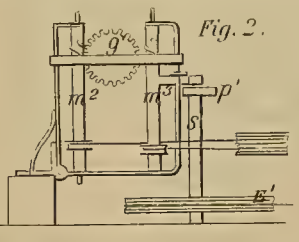

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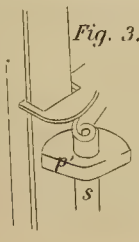

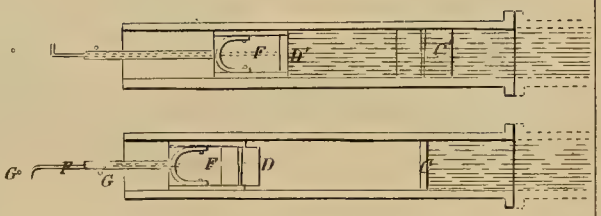

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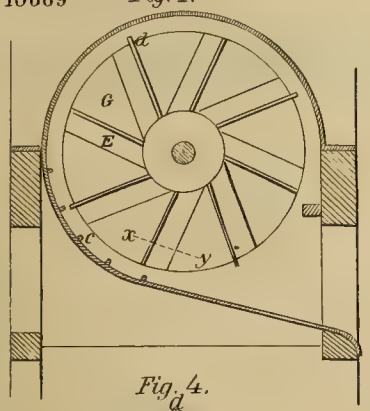

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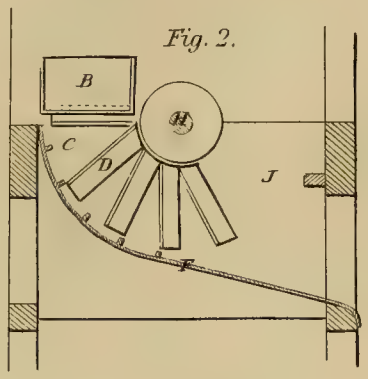

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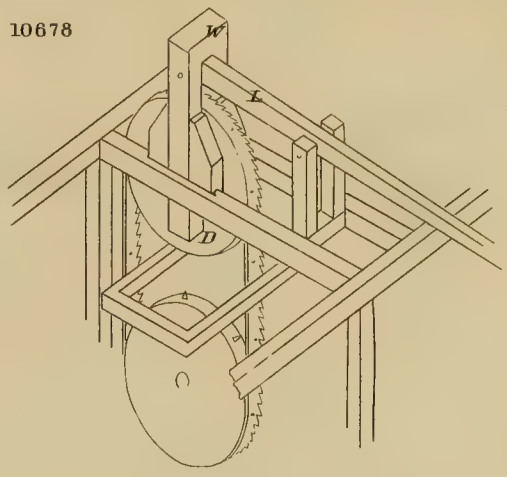

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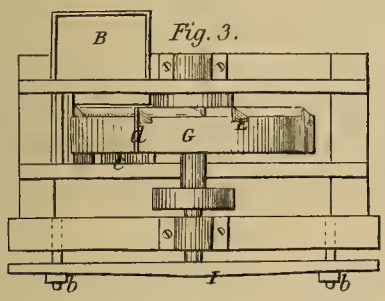

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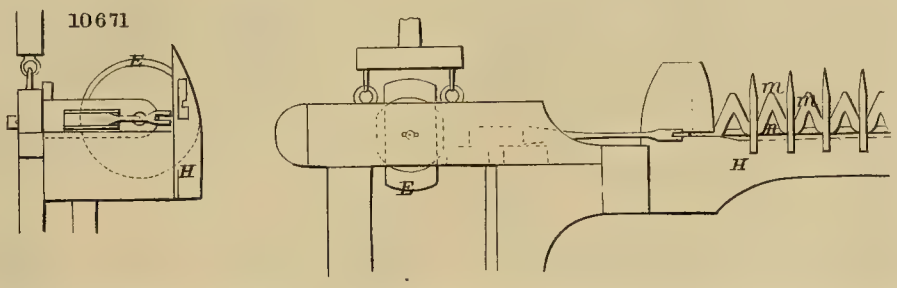

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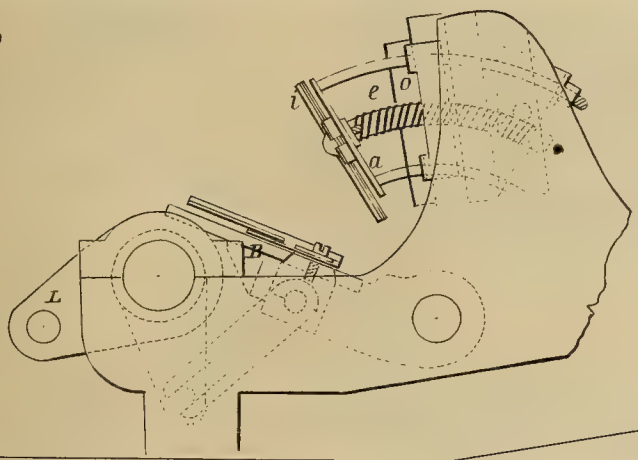

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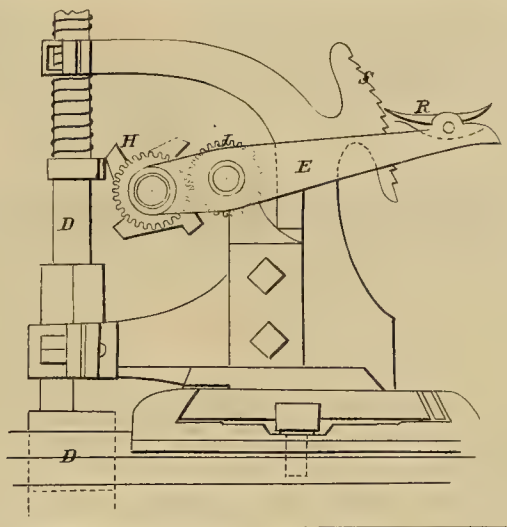

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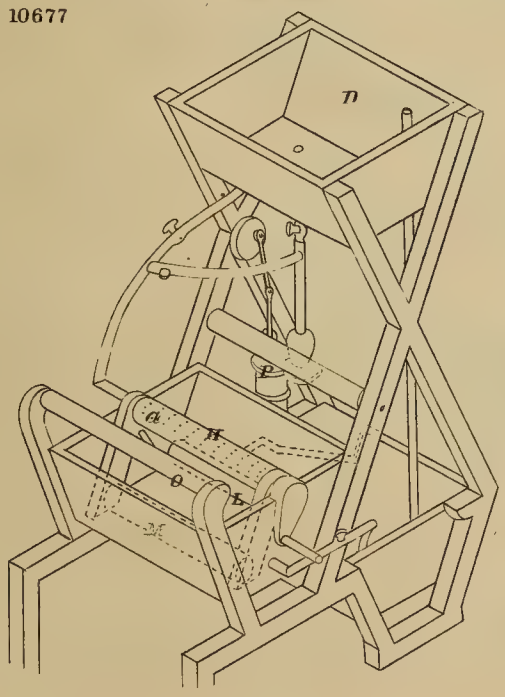

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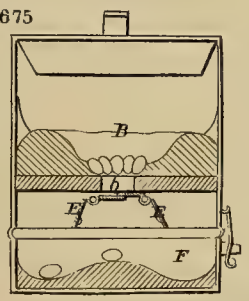

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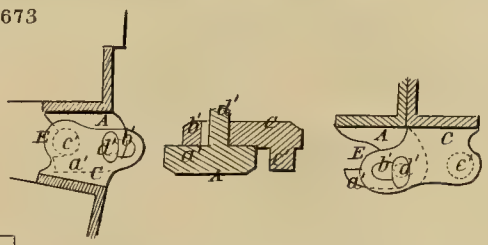

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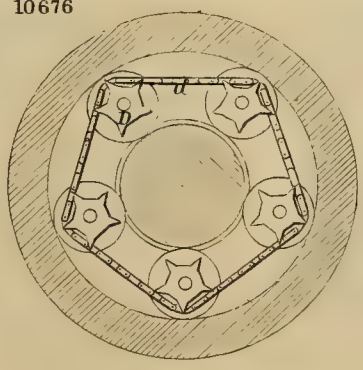

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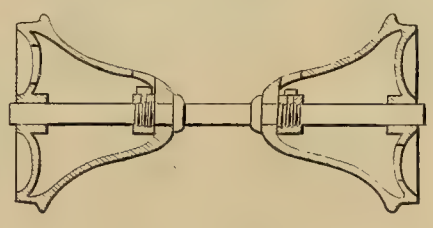

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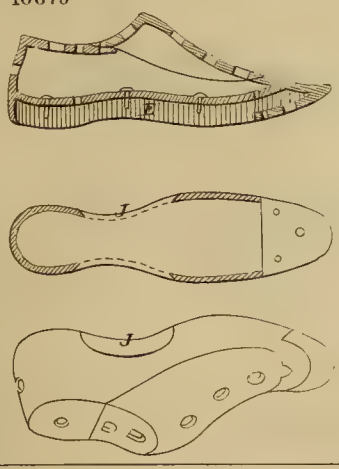

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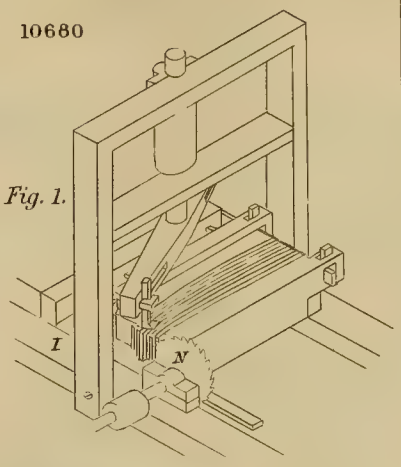

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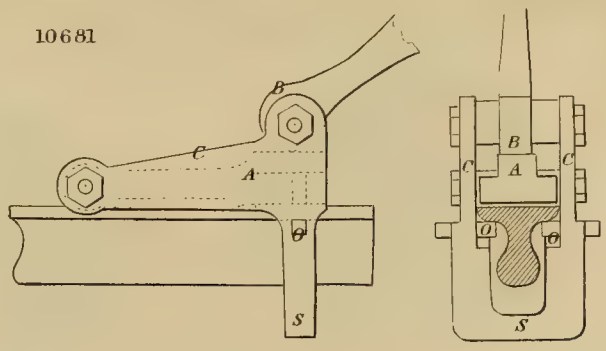

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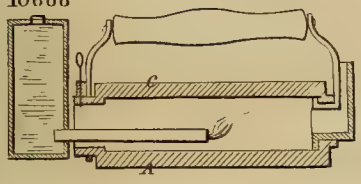

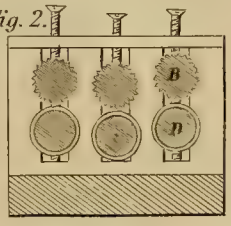

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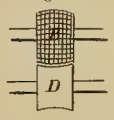

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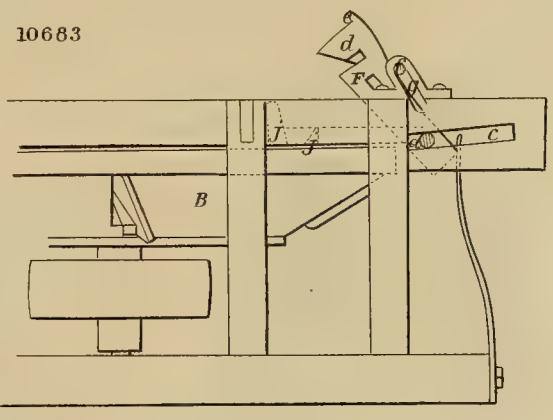

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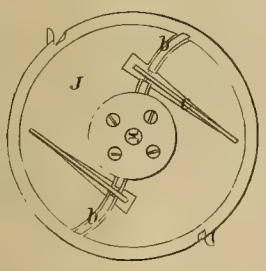

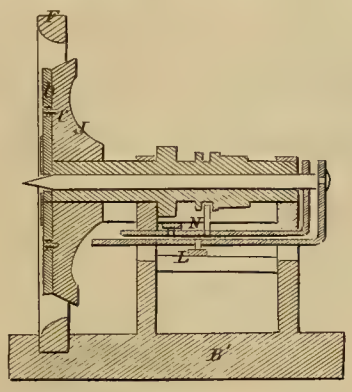

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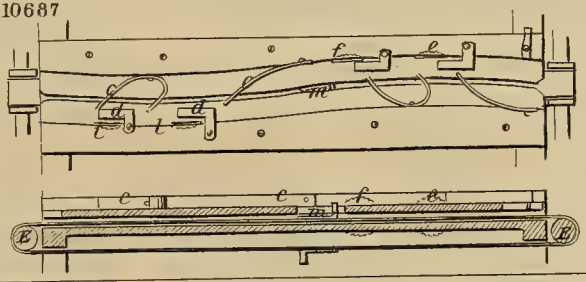

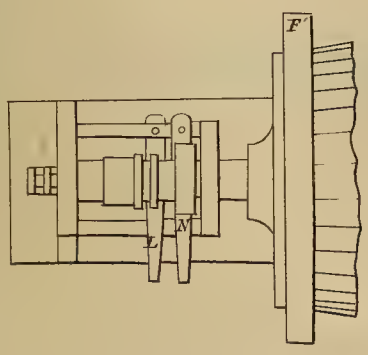

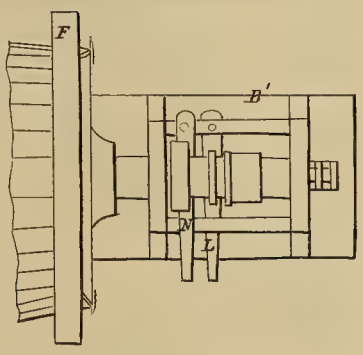

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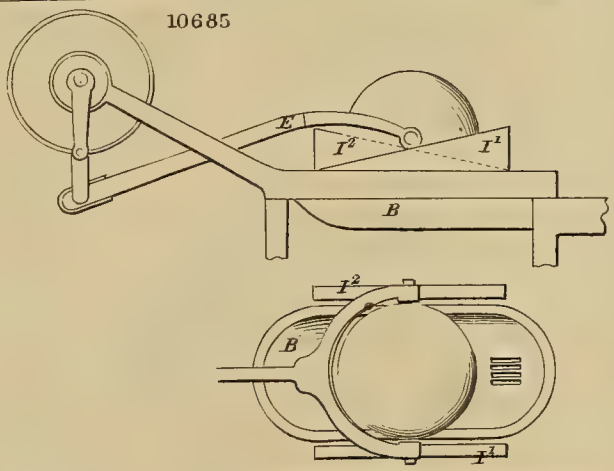

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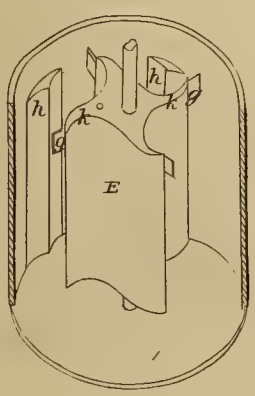

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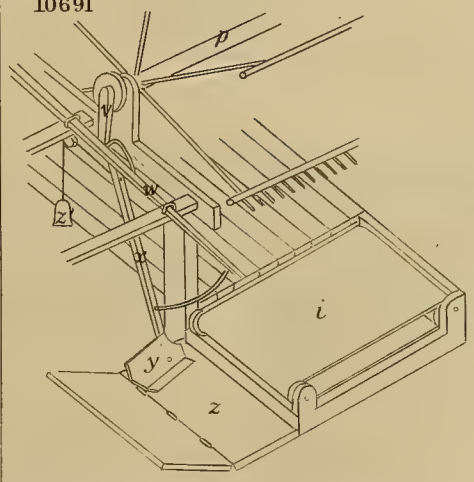

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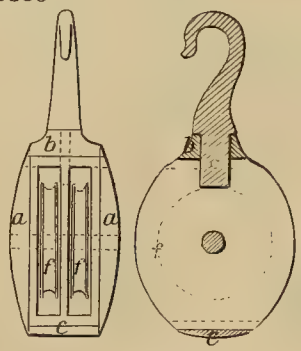

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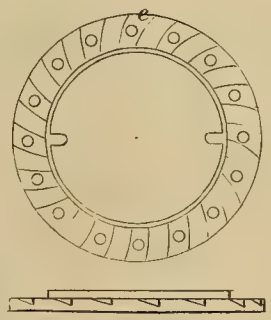

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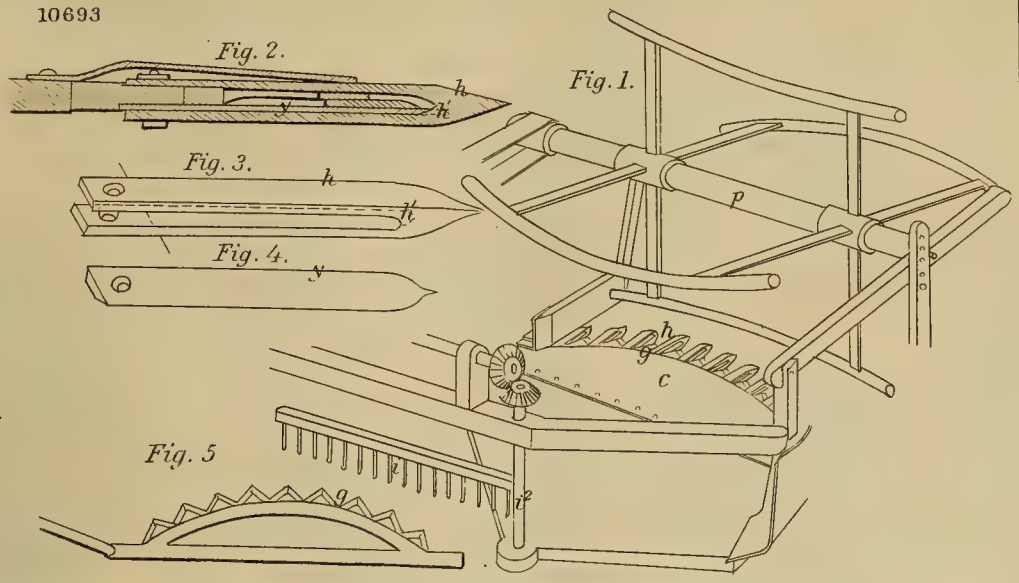

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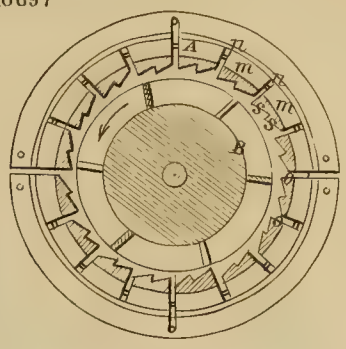

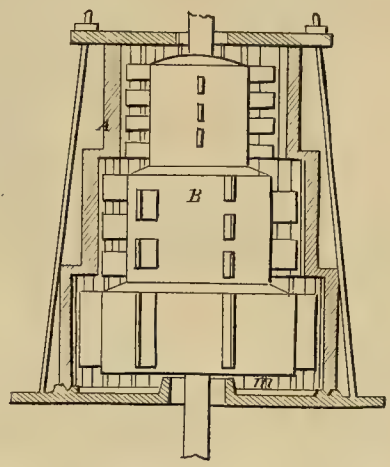

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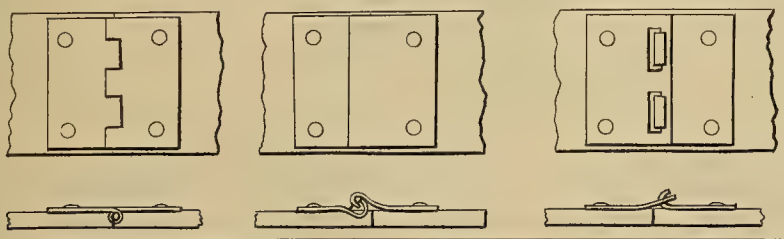

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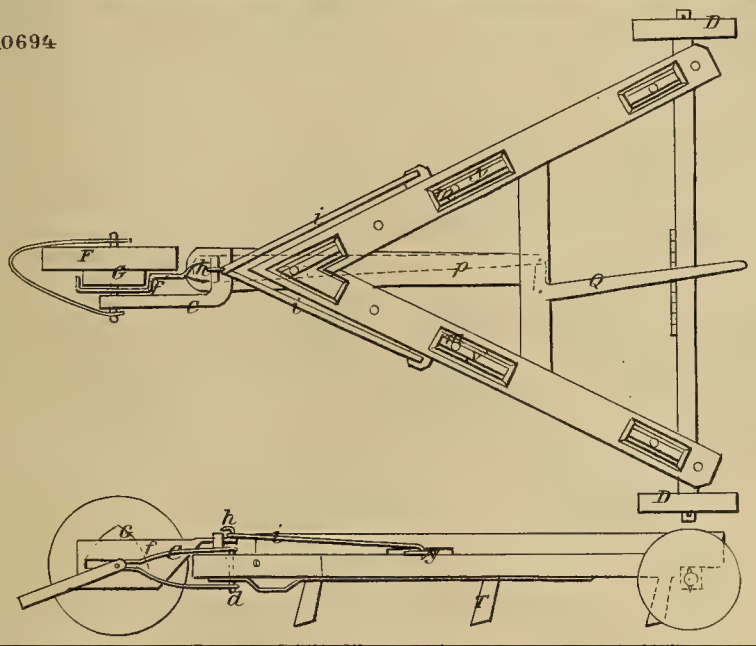

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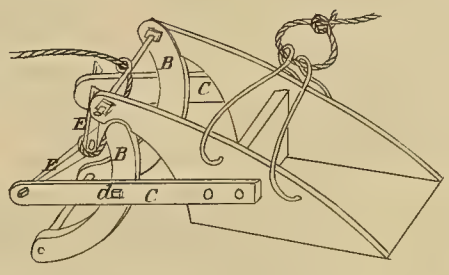

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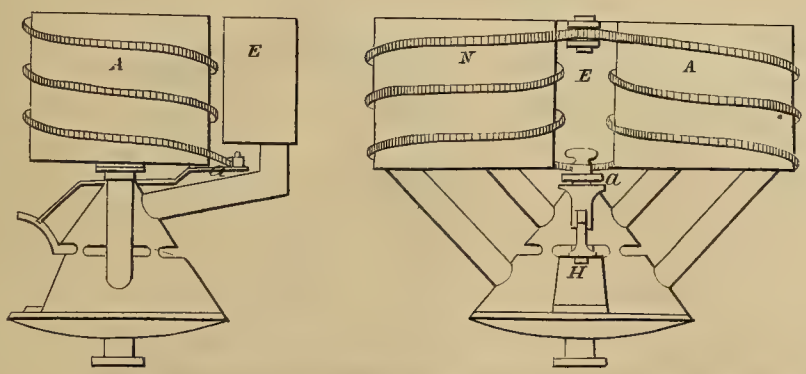

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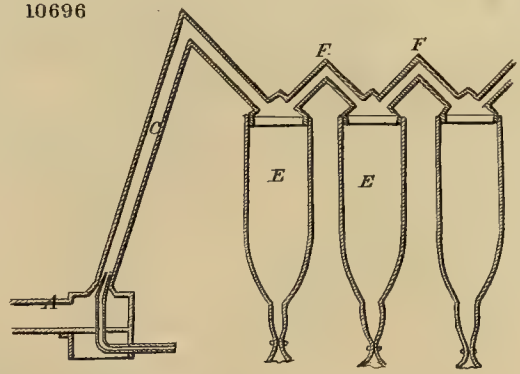

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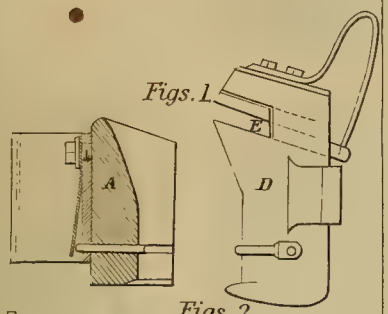
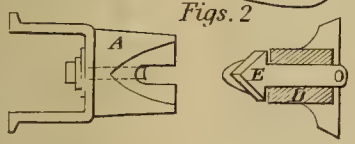


Figs. 2



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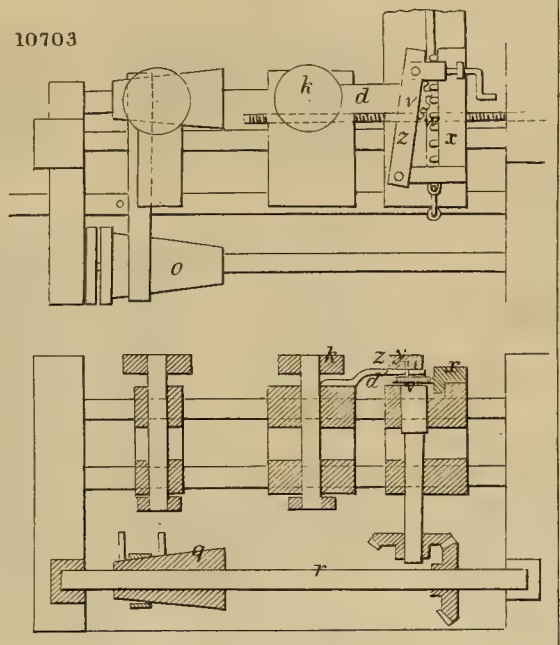

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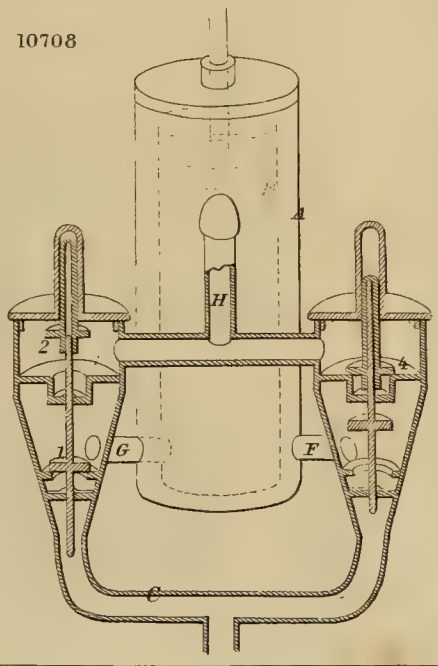

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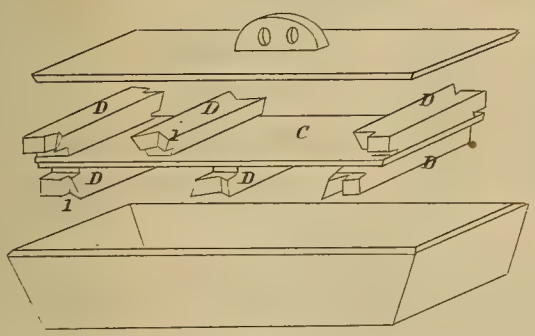

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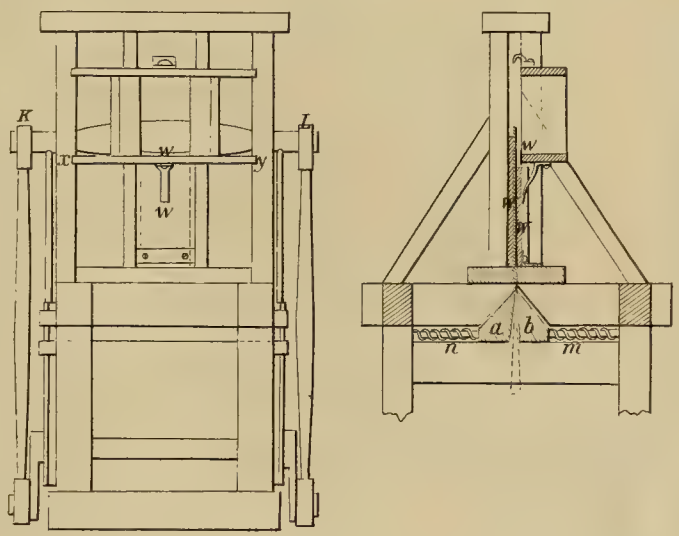

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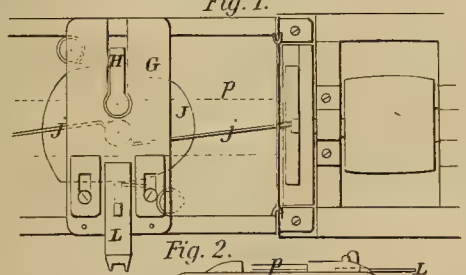

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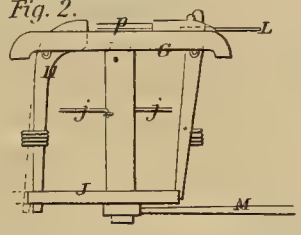

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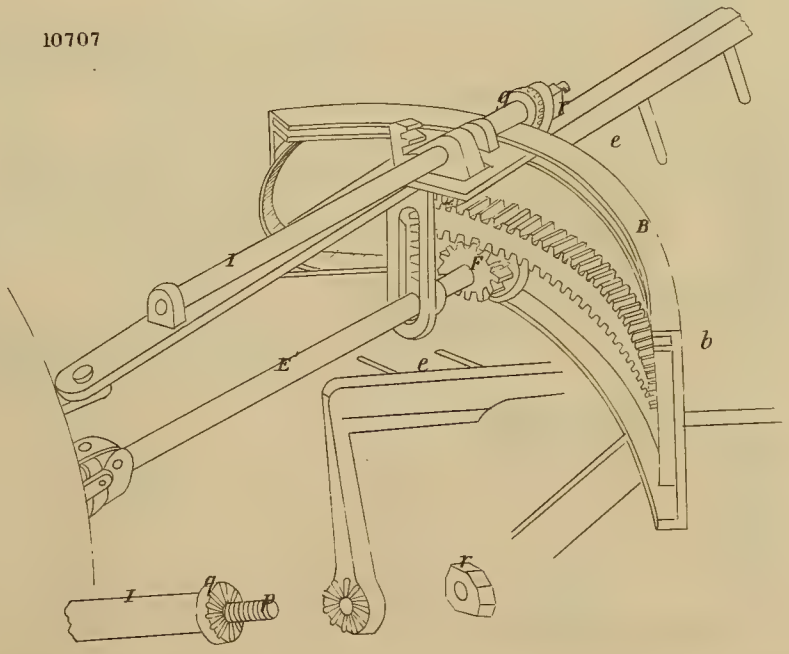

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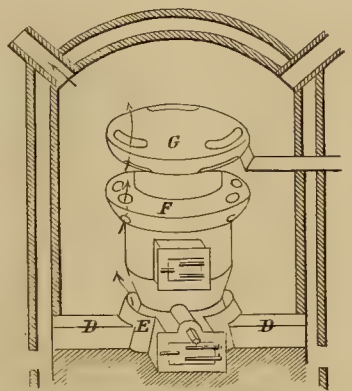

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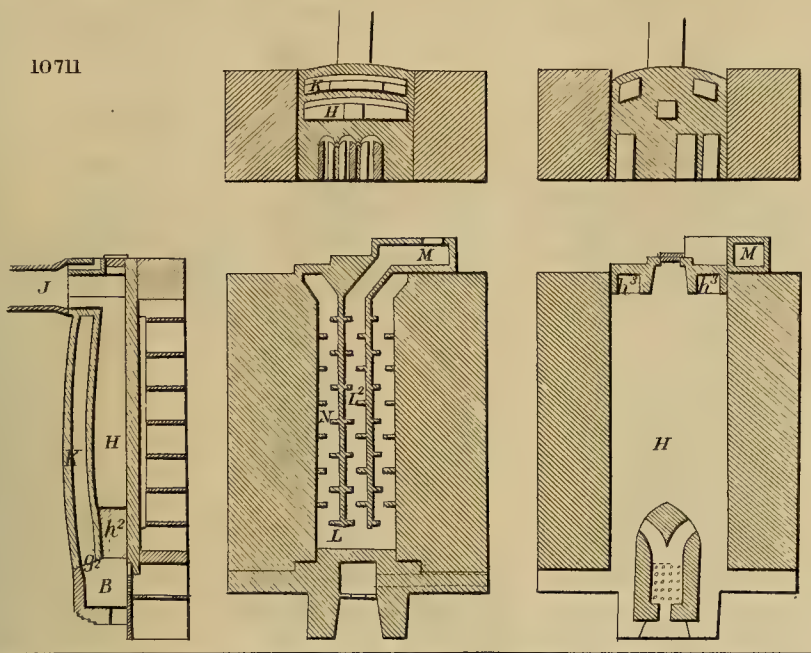

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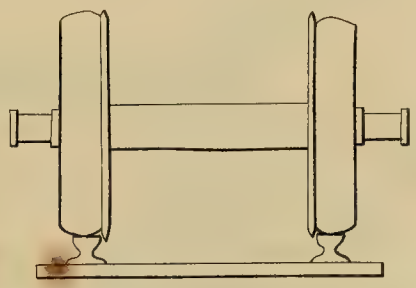

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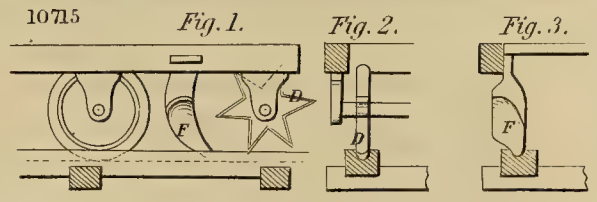

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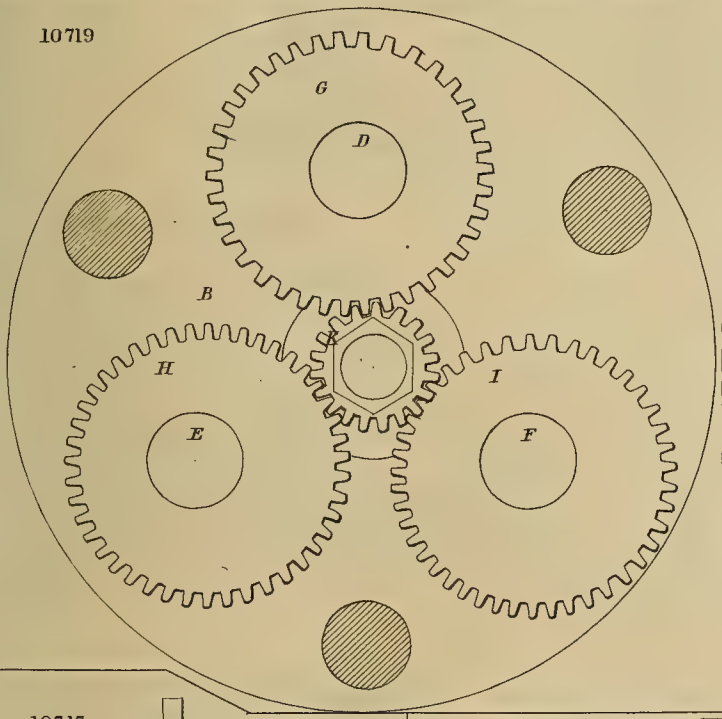

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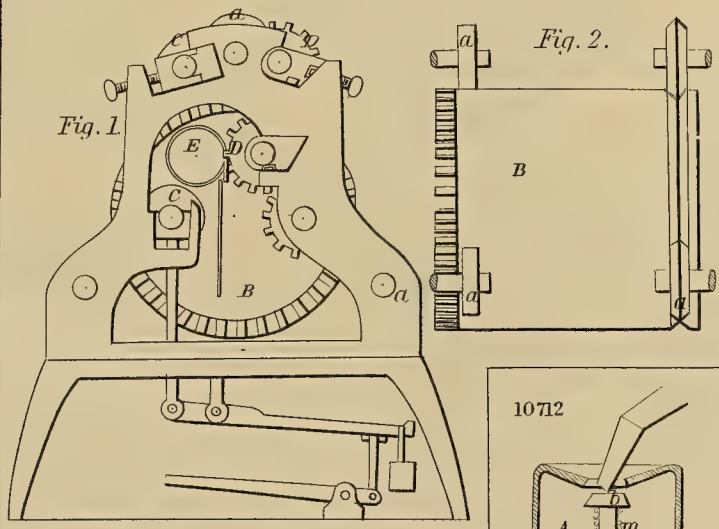

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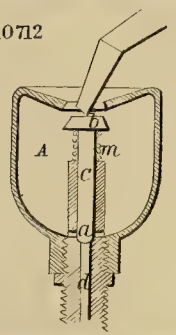

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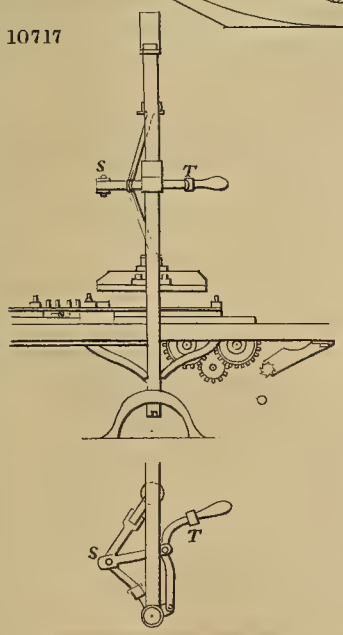

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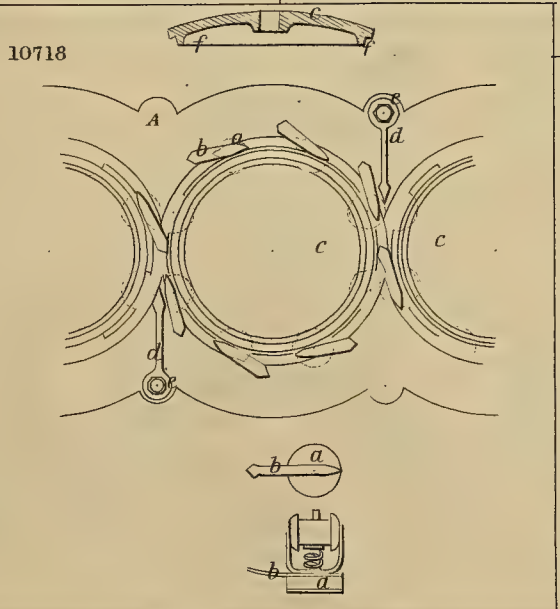

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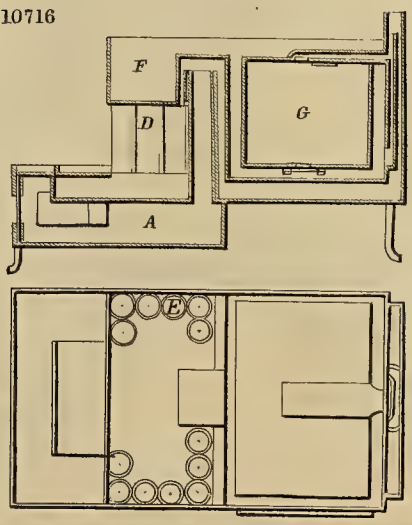

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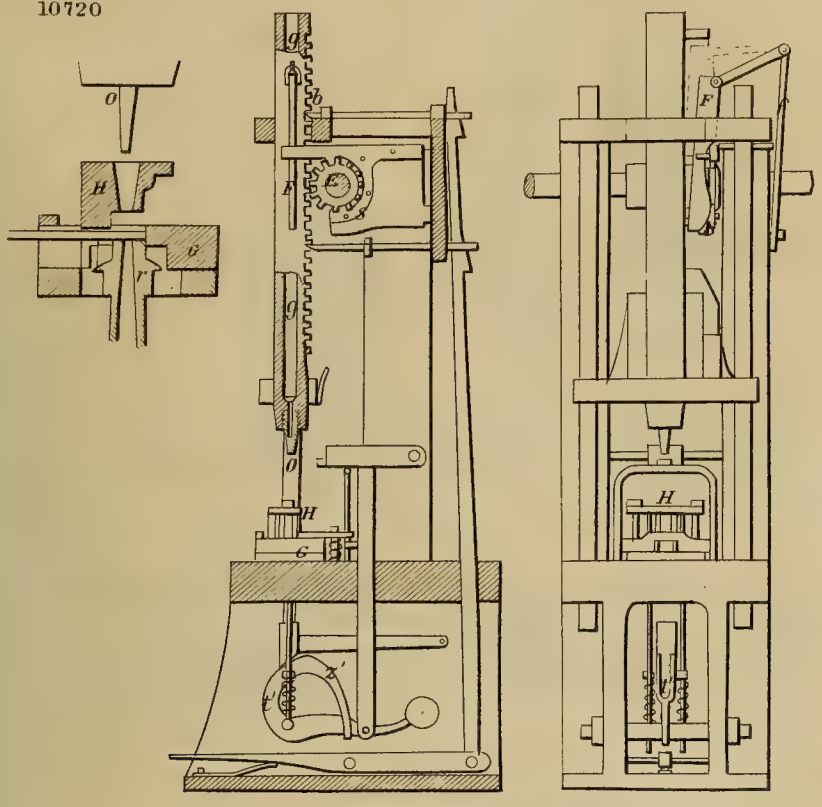

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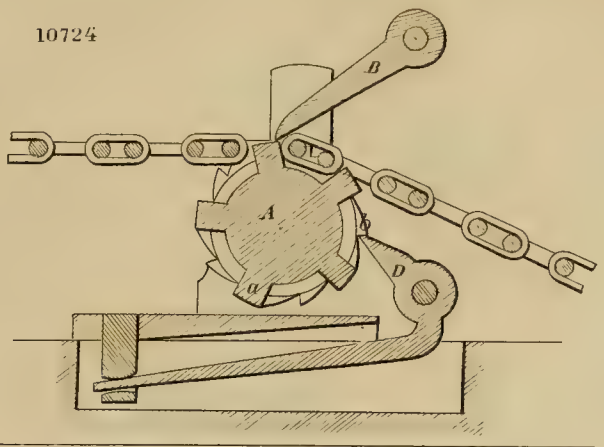

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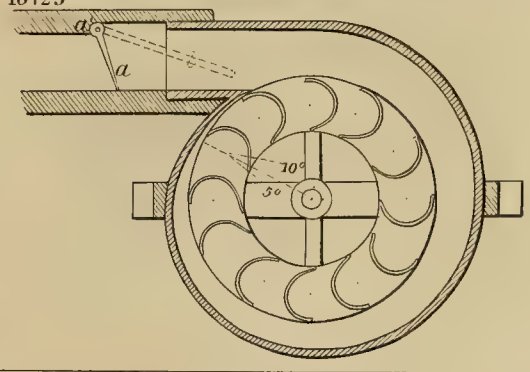

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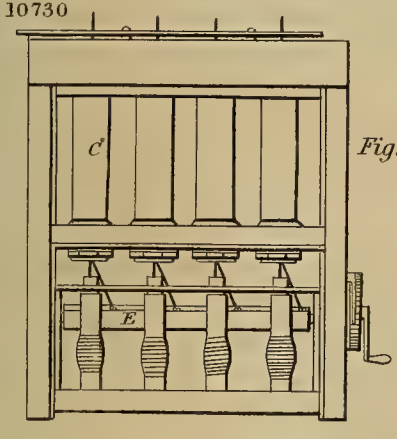

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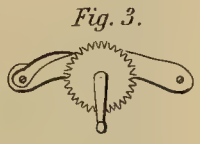

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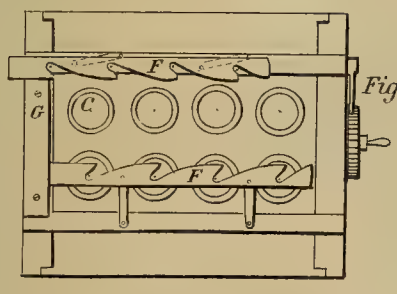

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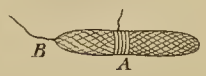

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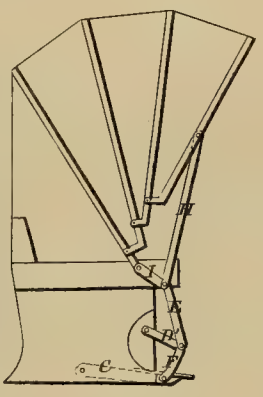

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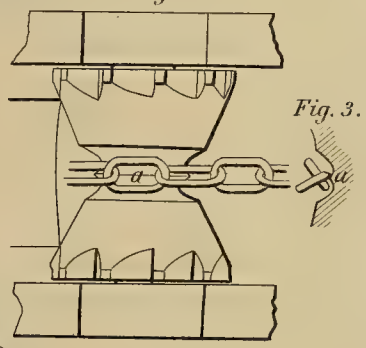

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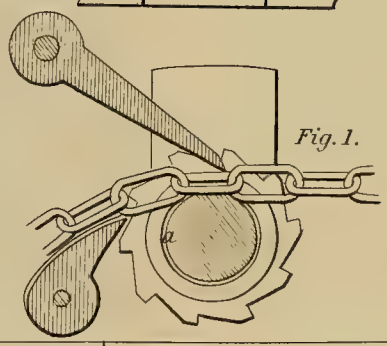

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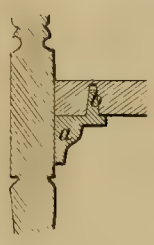

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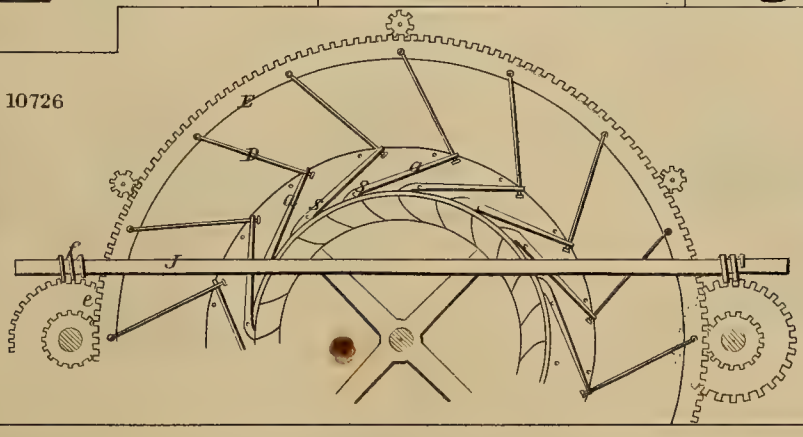

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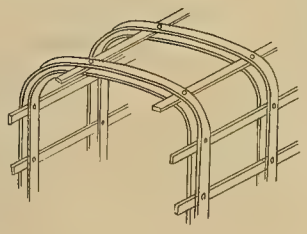

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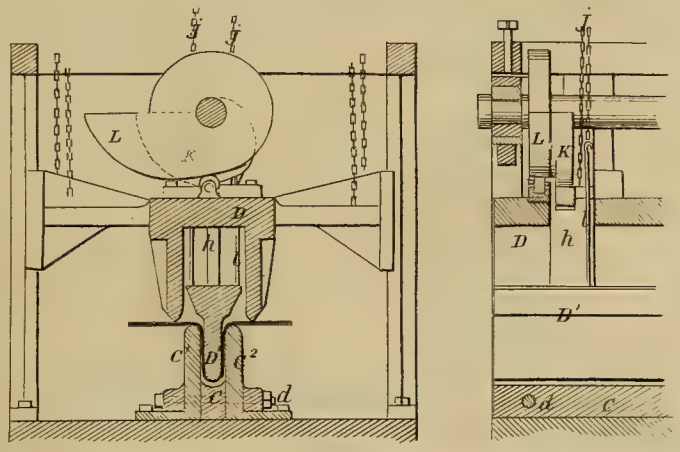

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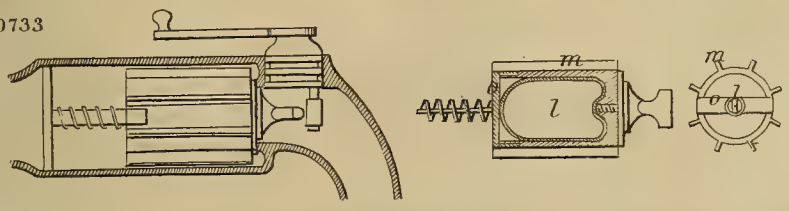

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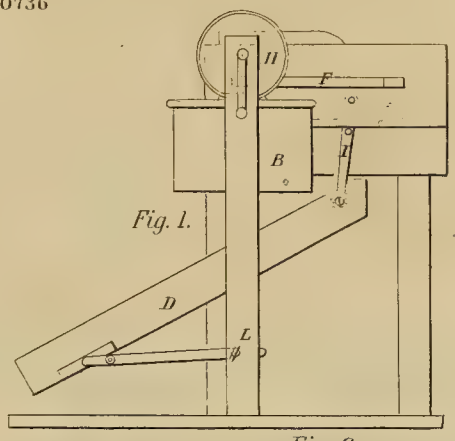

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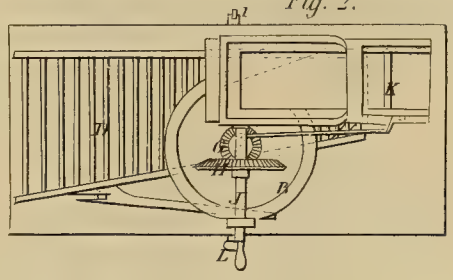

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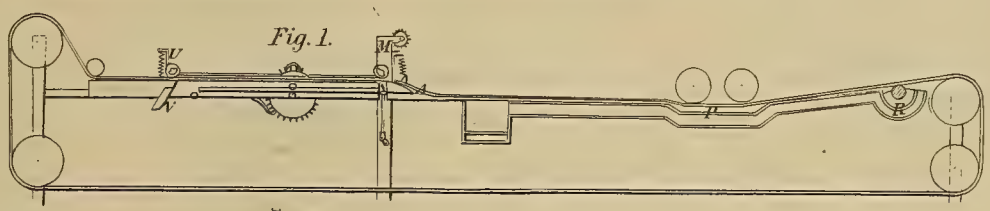

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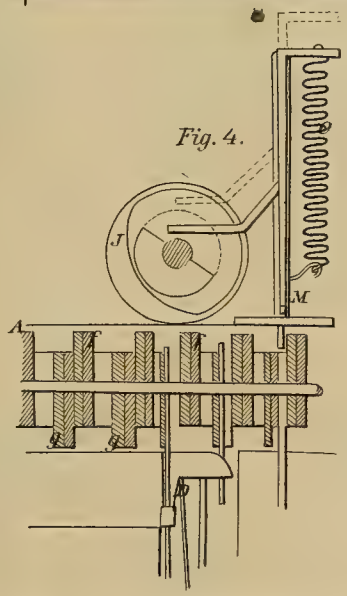

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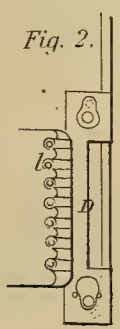

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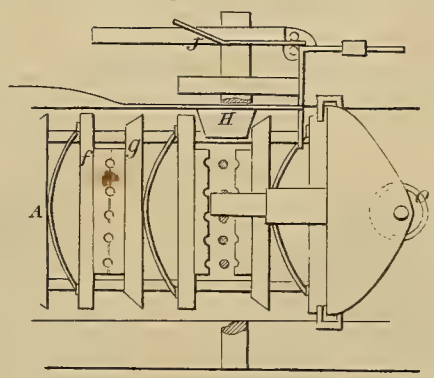

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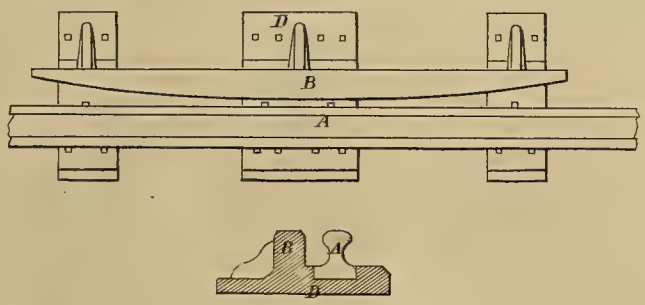

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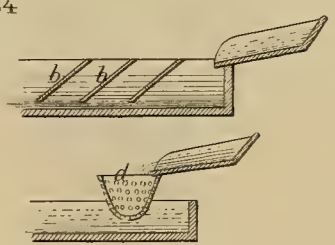

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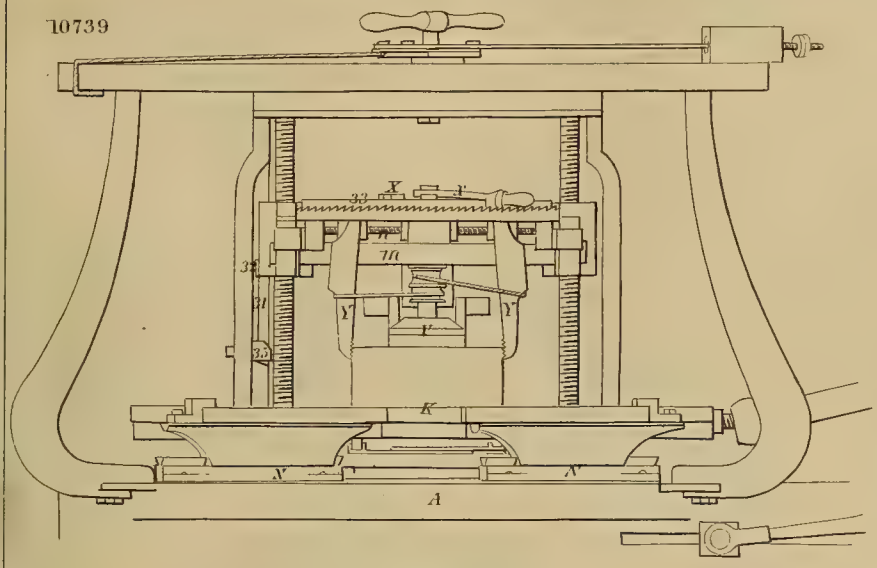

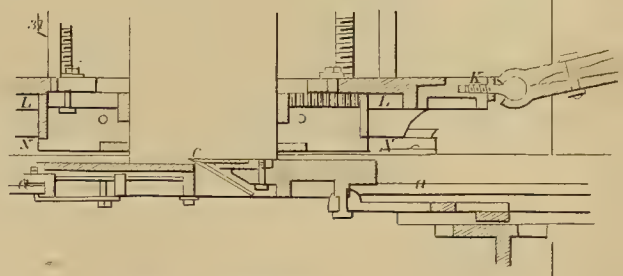

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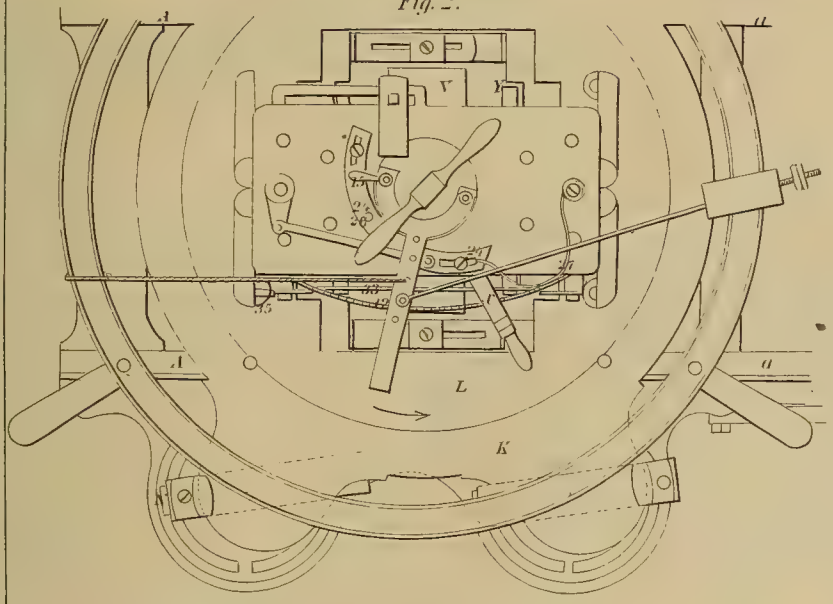

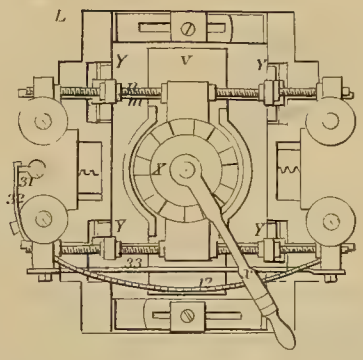

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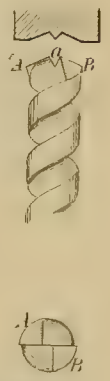

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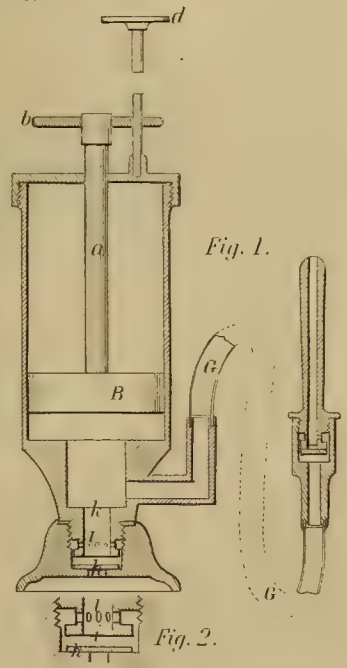

Fig. 1.

Fig. 2.

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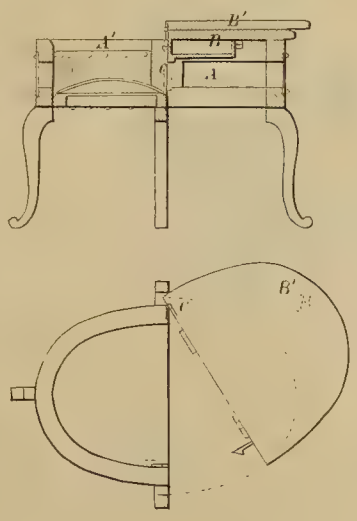

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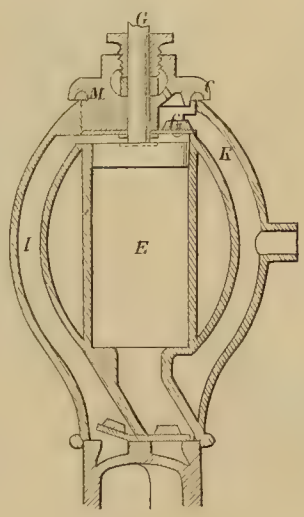

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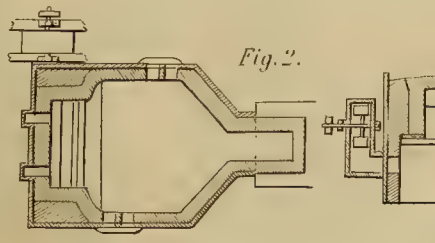

Fig. 2.

Fig. 3.

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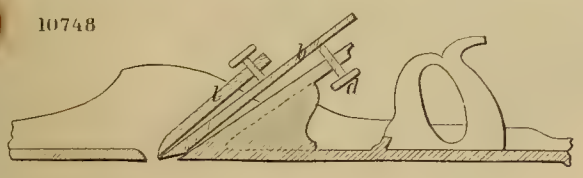

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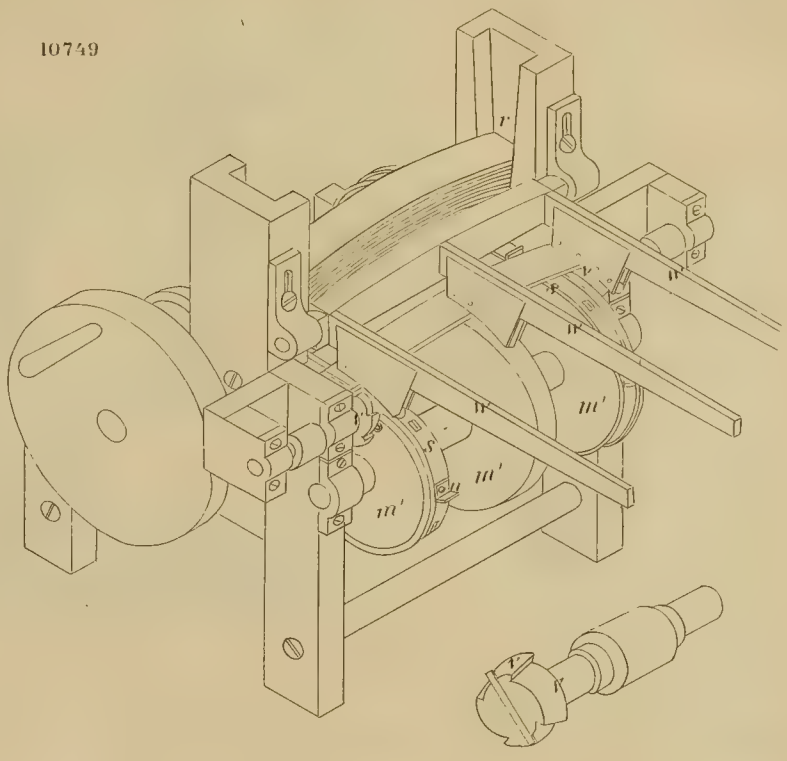

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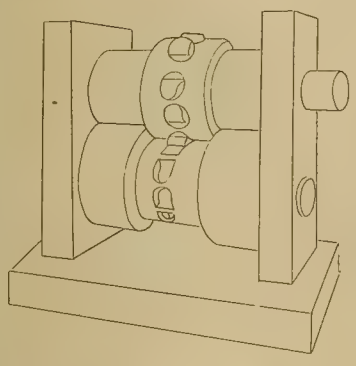

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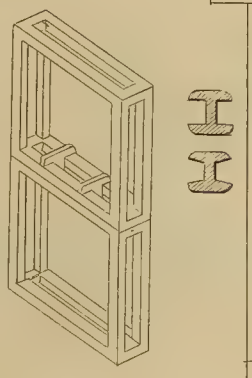

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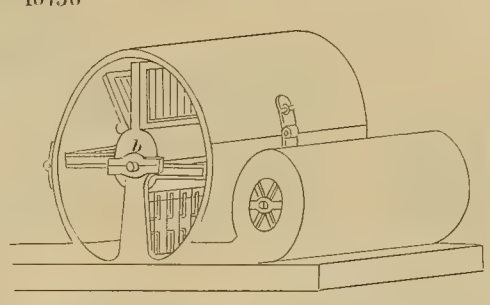

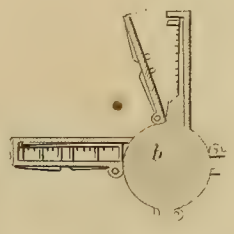

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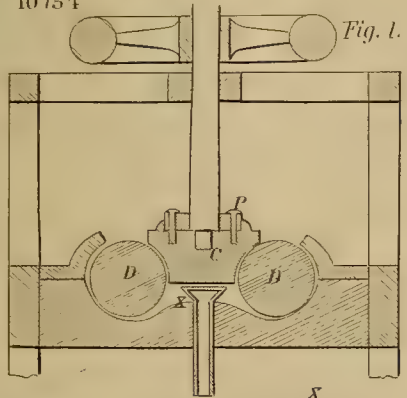

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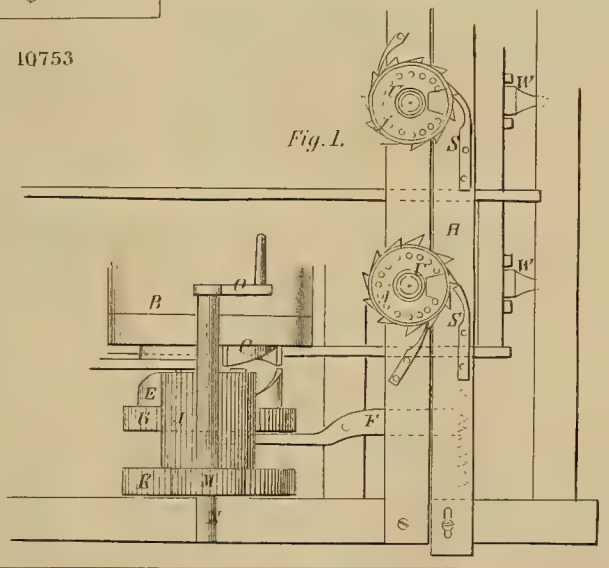

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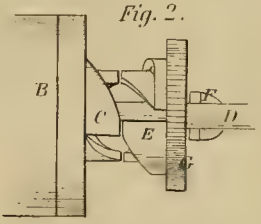

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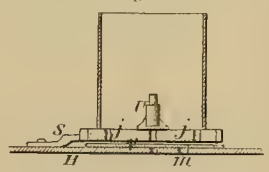

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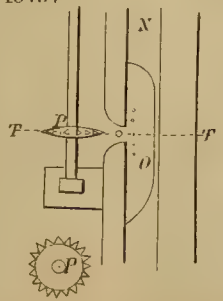

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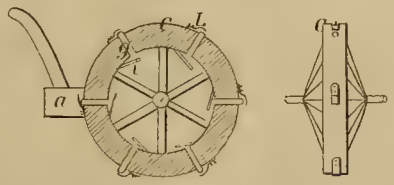

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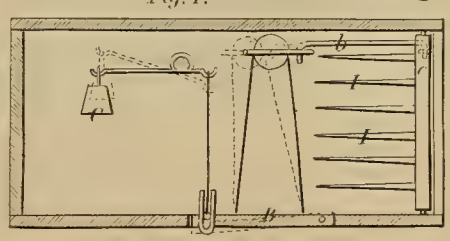

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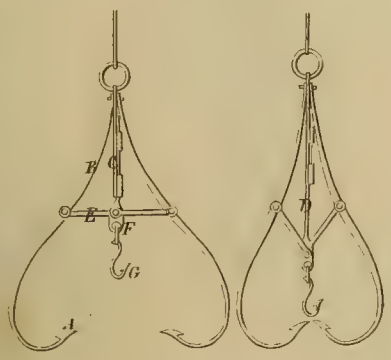

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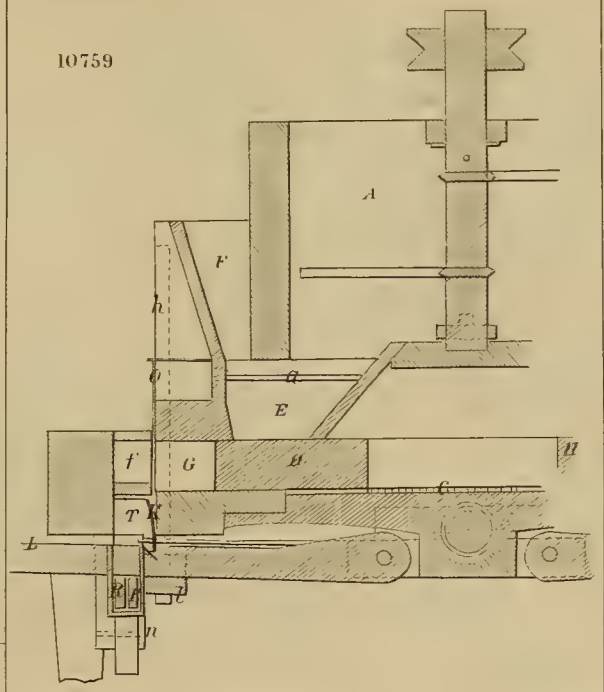

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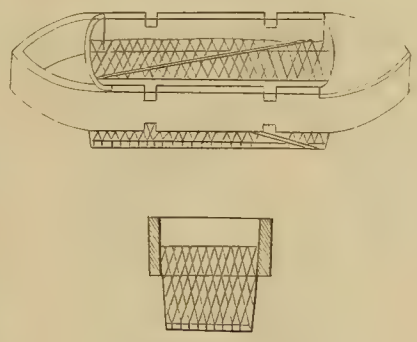

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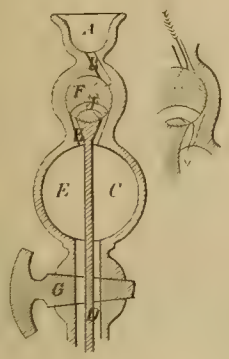

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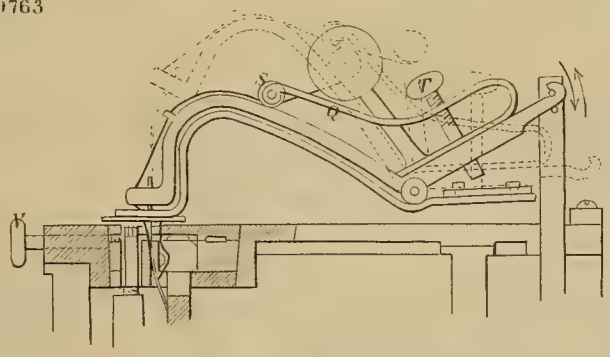

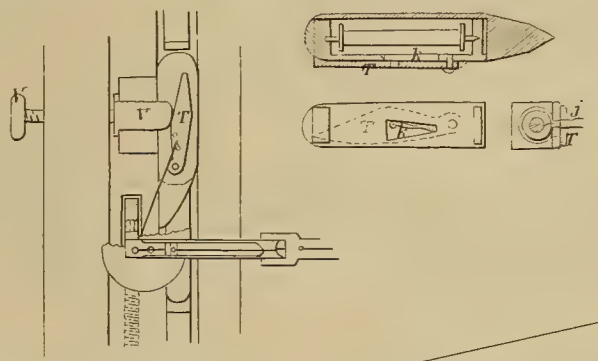

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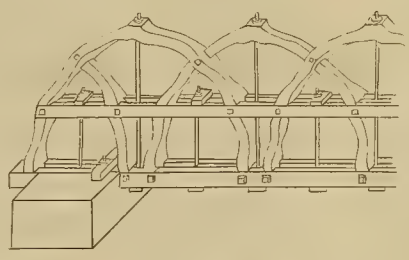

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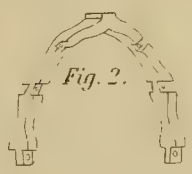

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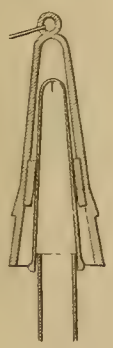

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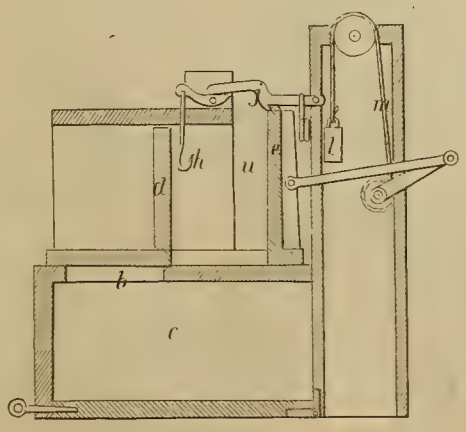

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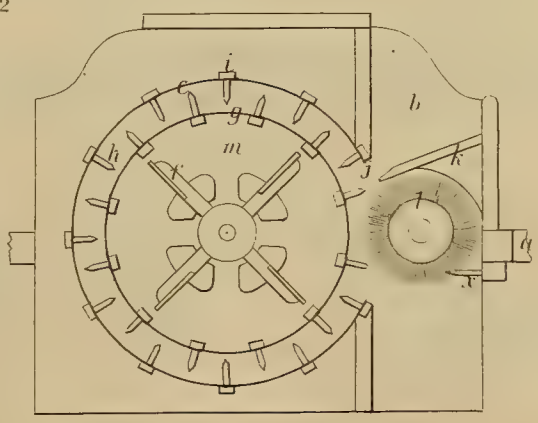

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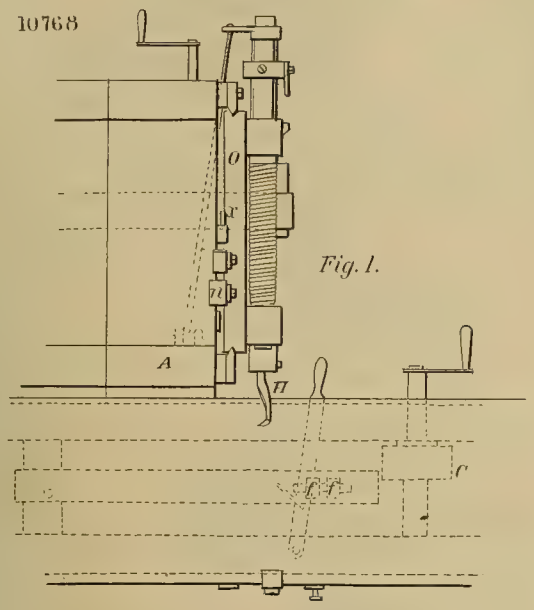

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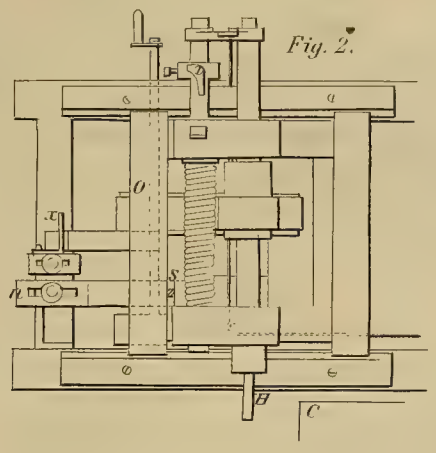

Fig. 2.

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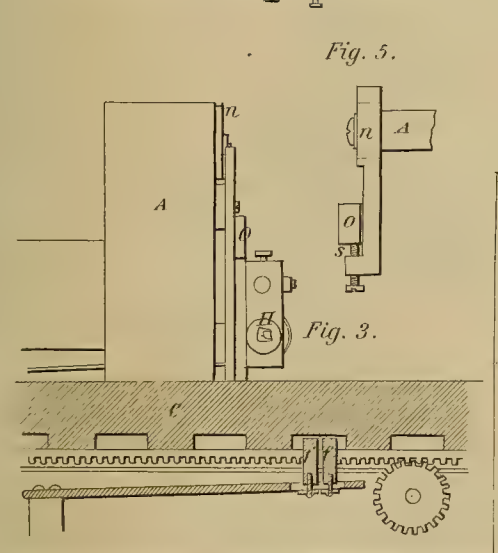

Fig. 5.

Fig. 3.

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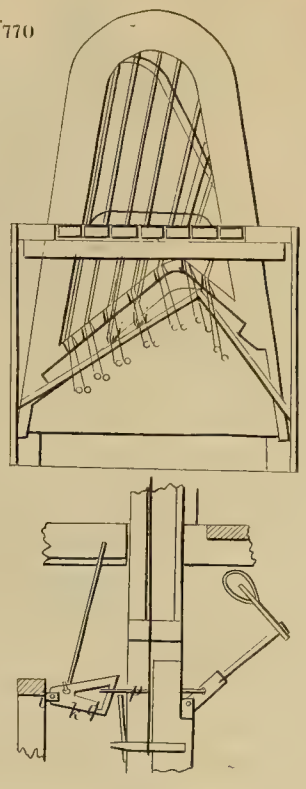

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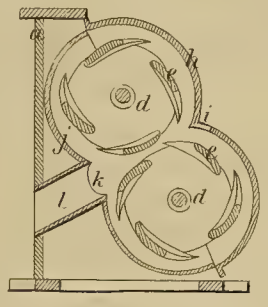

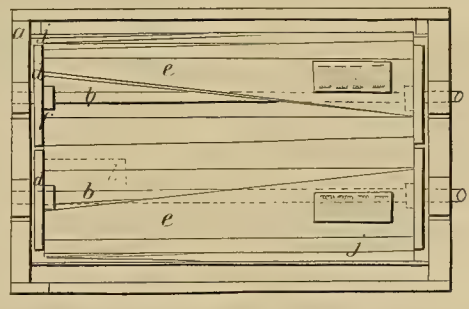

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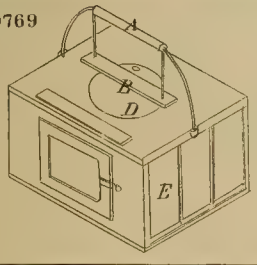

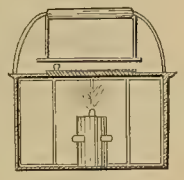

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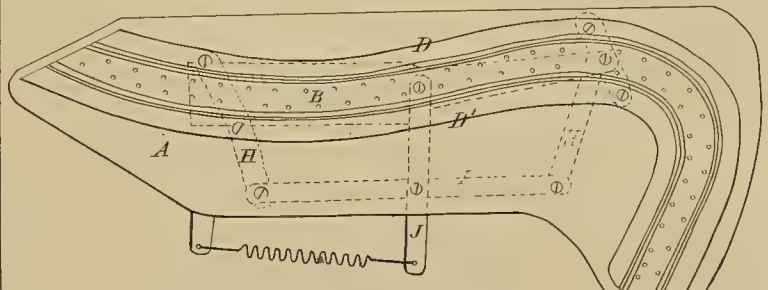

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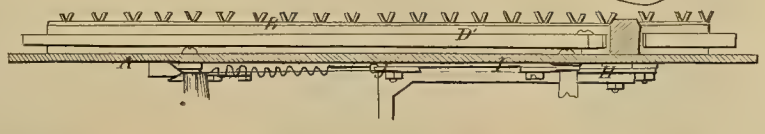

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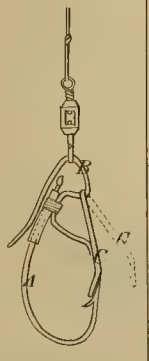

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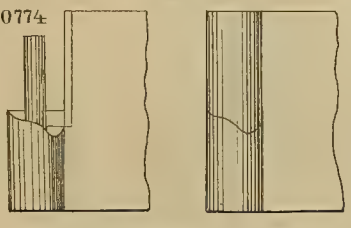

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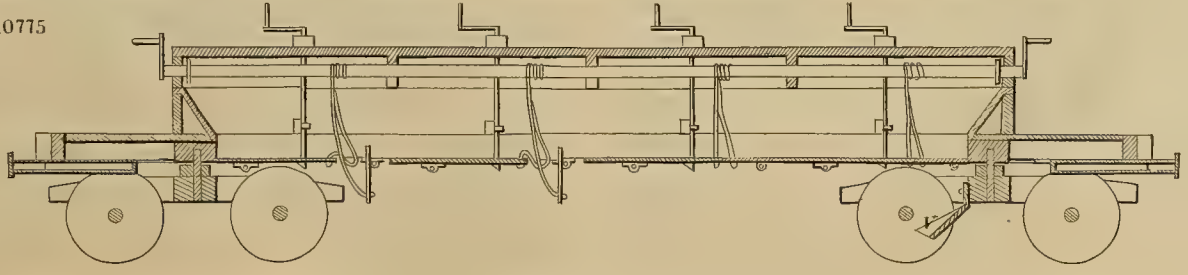

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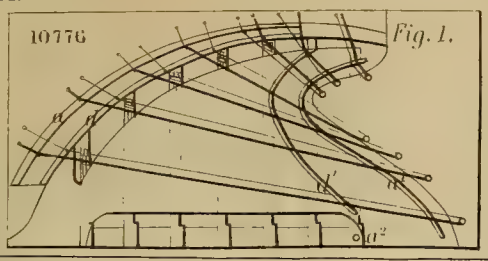

Fig. 2.

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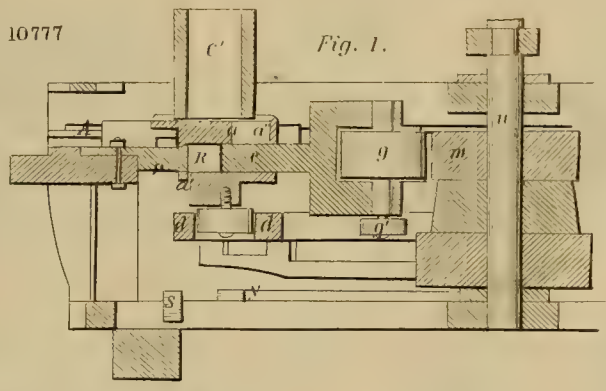

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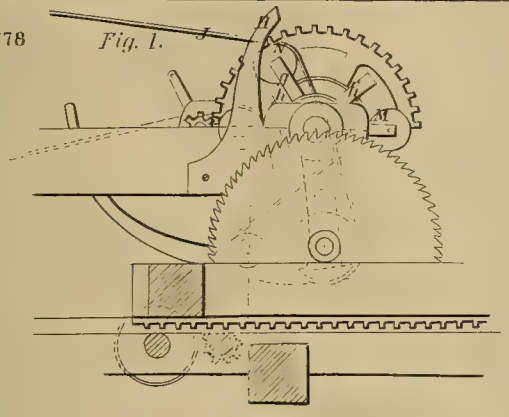

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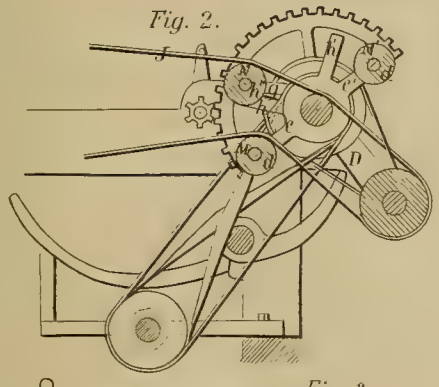

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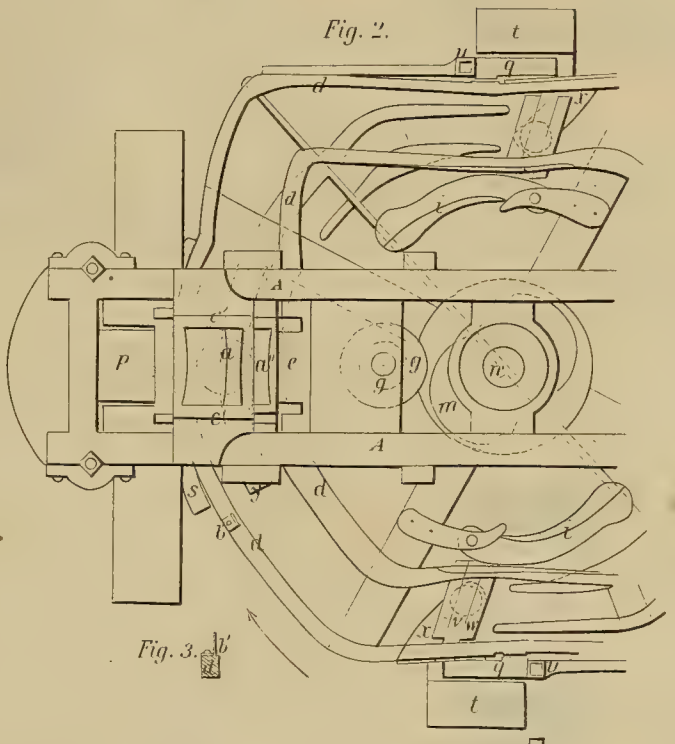

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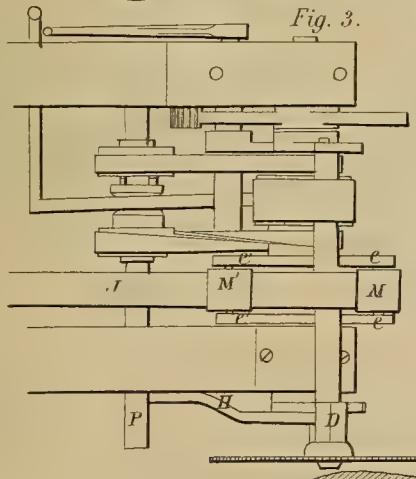

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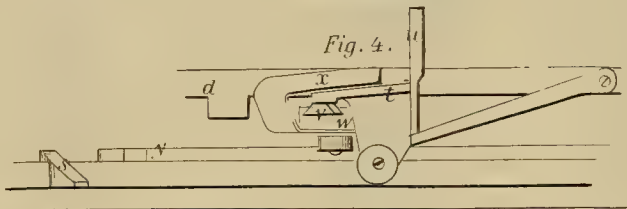

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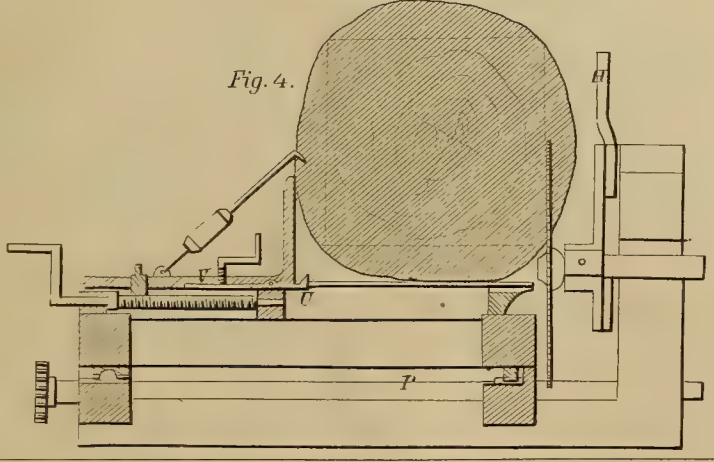

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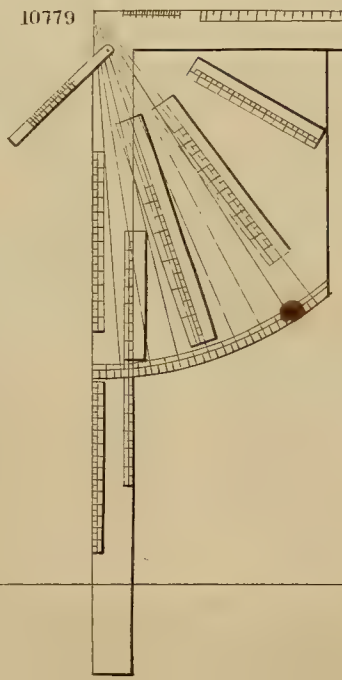

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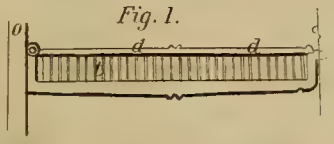

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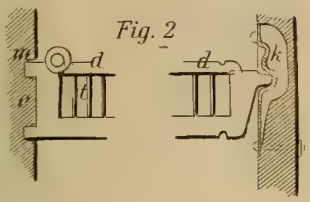

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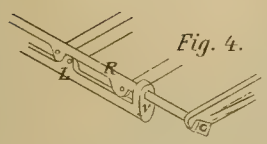

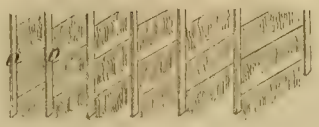

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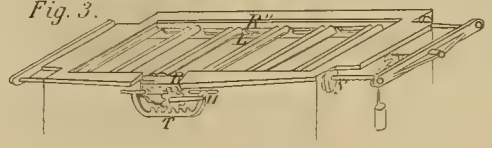

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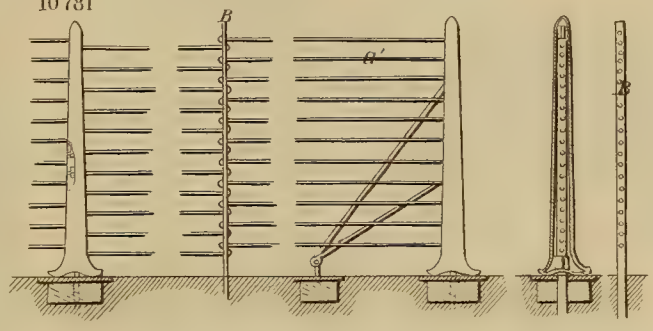

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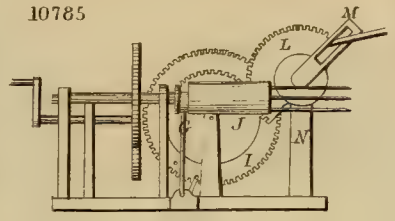

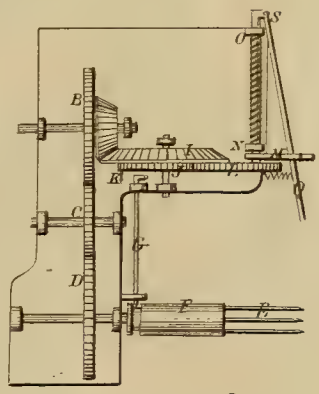

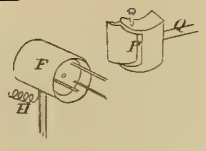

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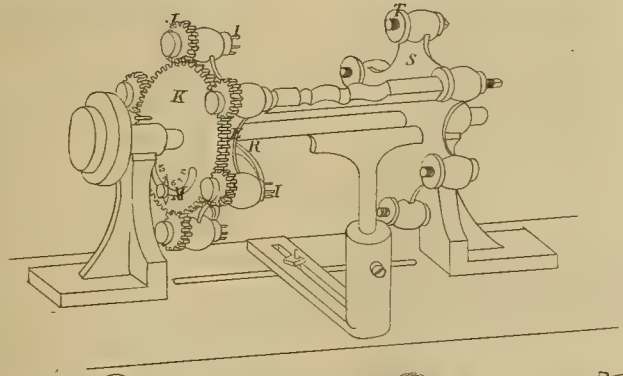

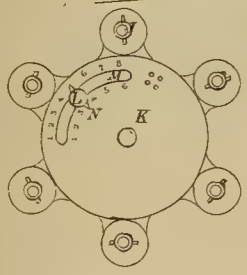

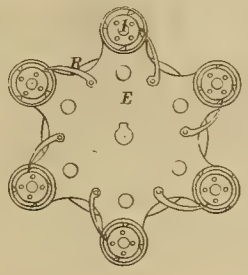

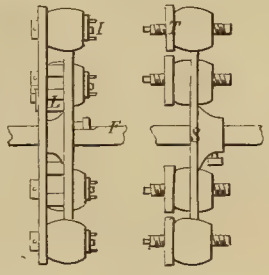

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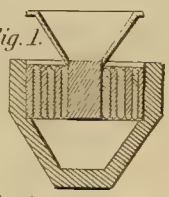

Fig. 2

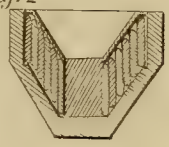

Fig. 3.

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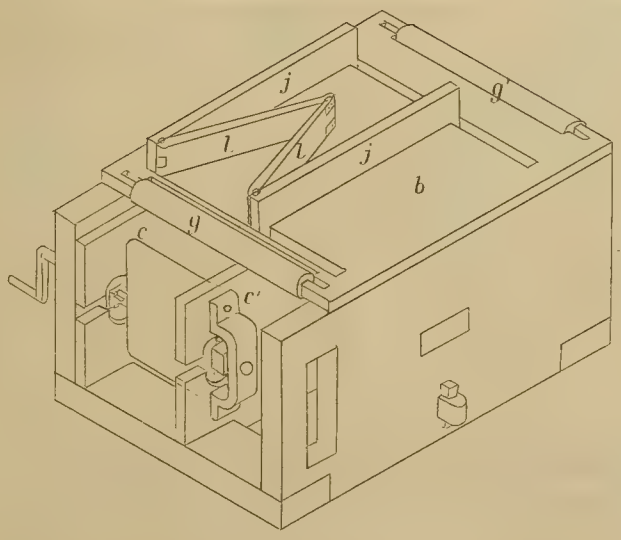

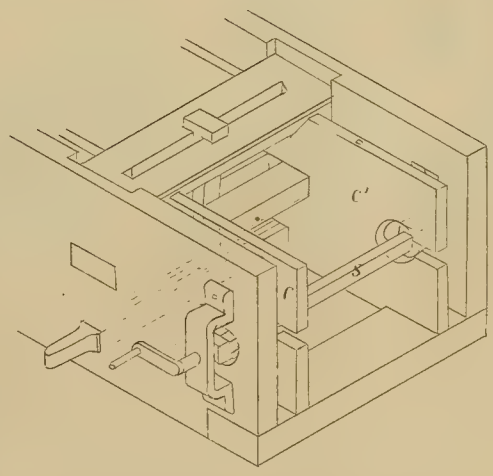

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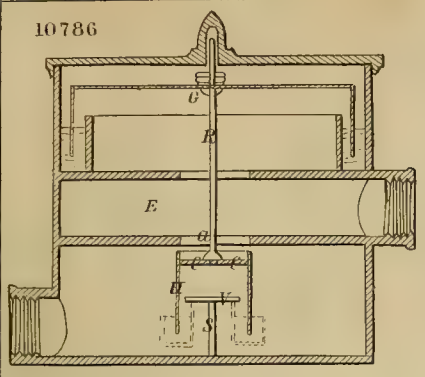

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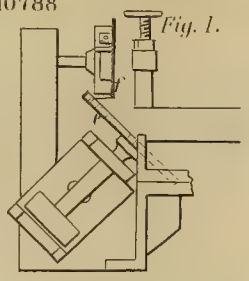

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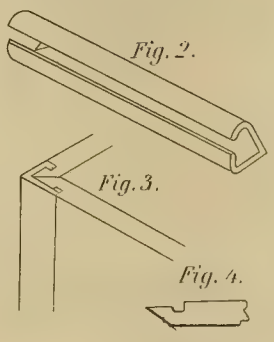

Fig. 2.

Fig. 3.

Fig. 4.

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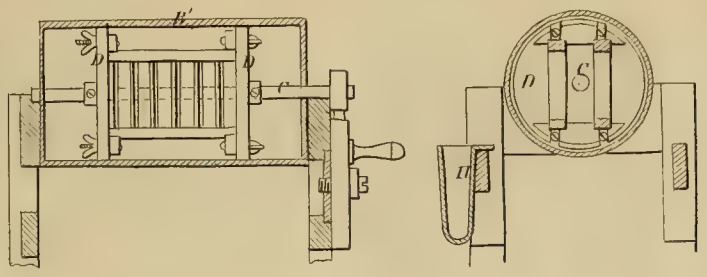

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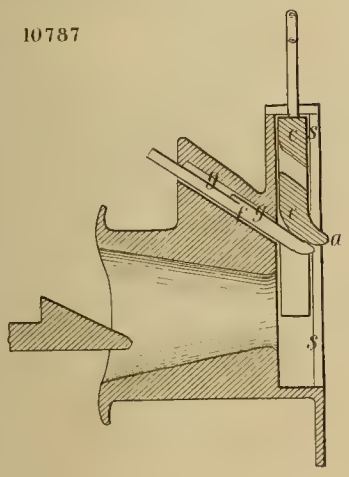

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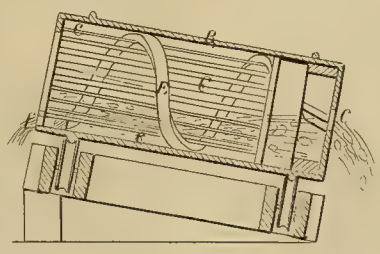

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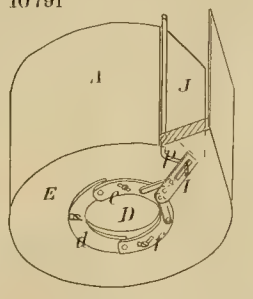

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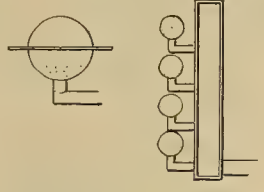

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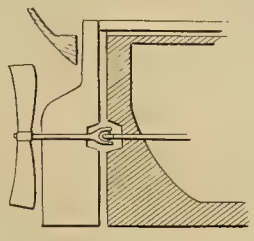

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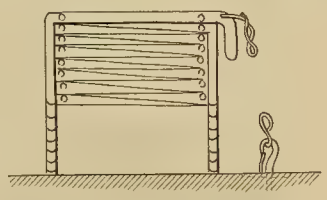

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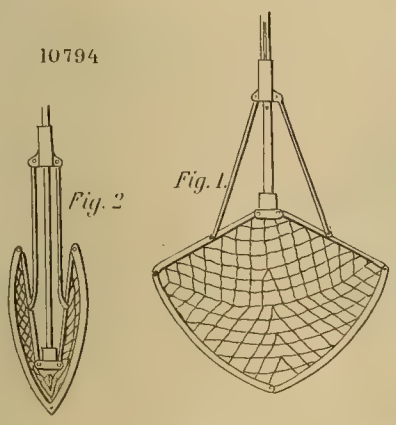

Fig. 2

Fig. 1.

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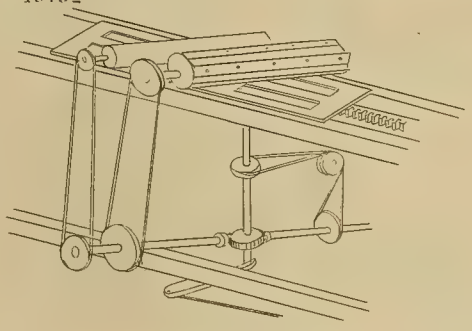

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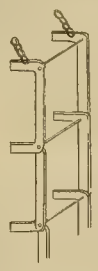

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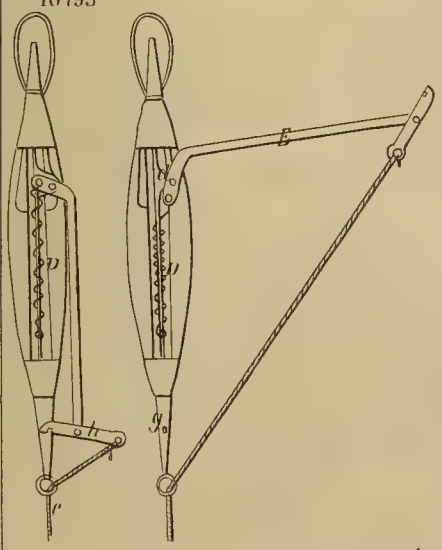

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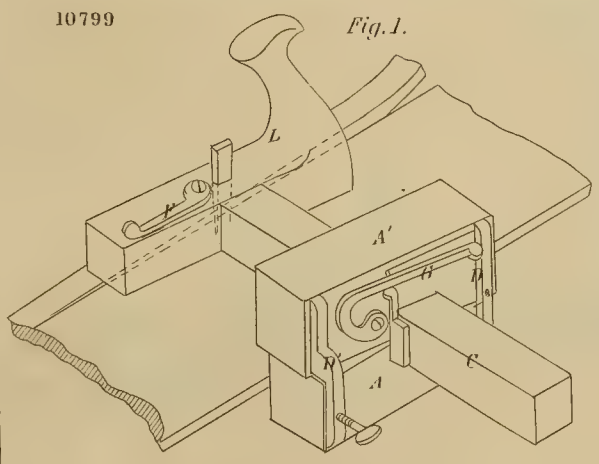

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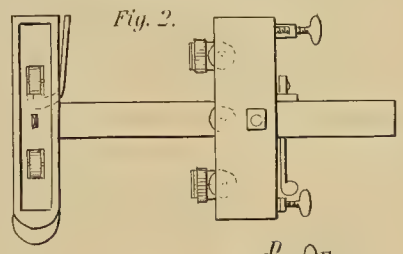

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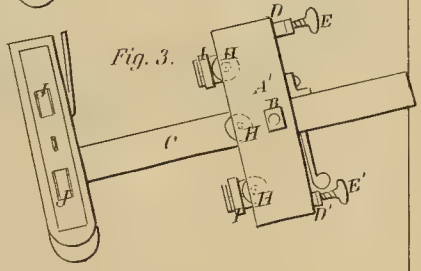

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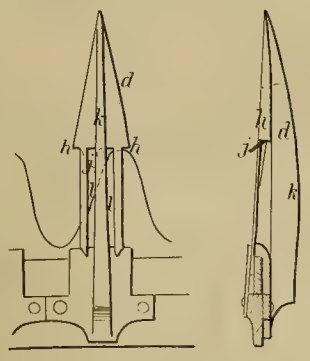

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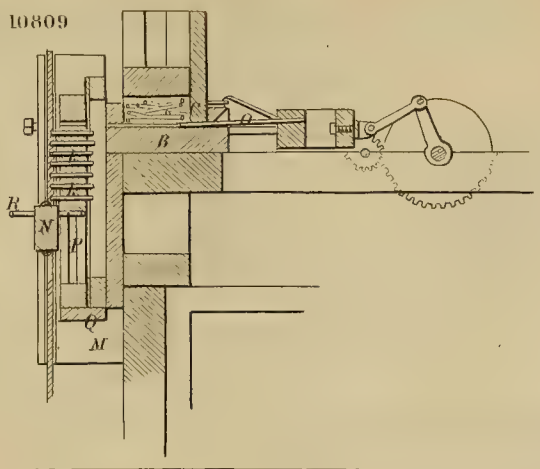

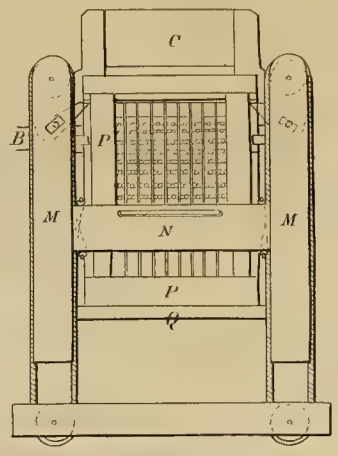

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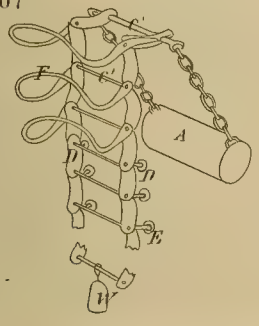

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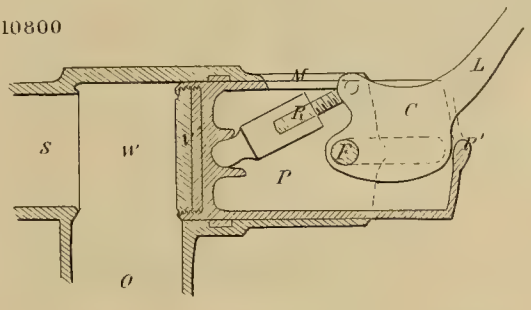

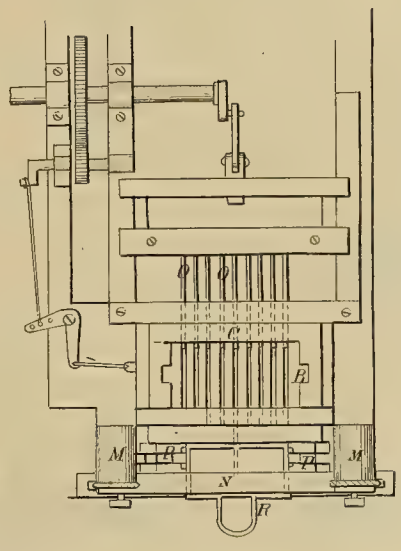

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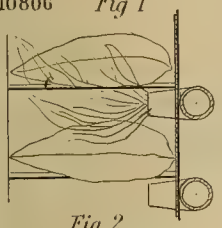

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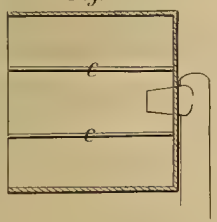

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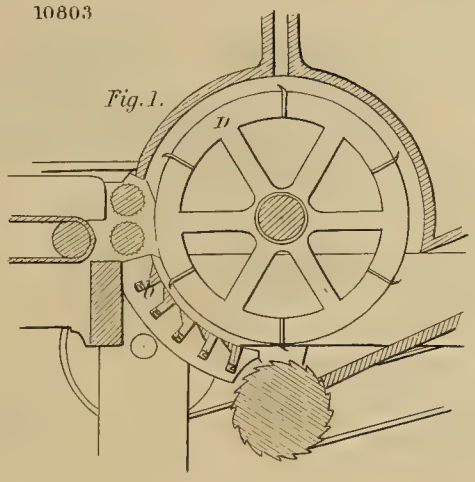

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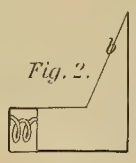

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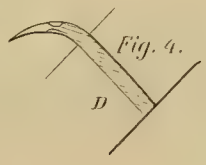

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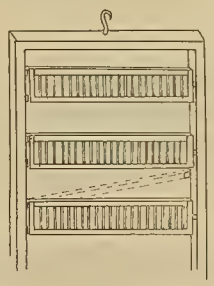

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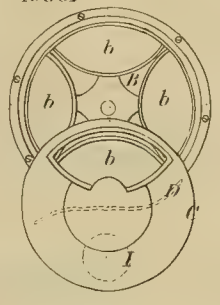

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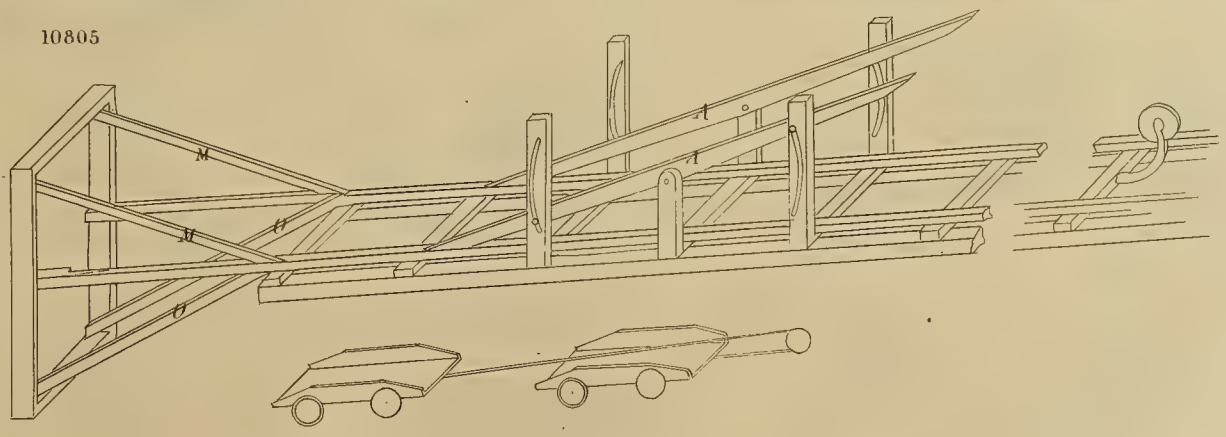

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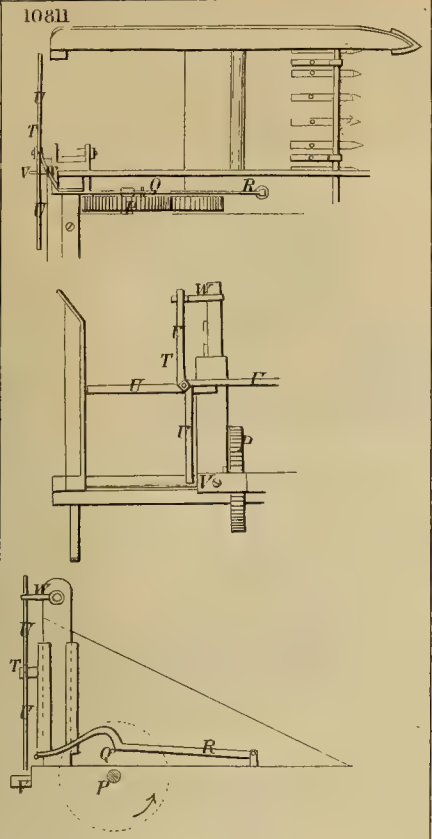

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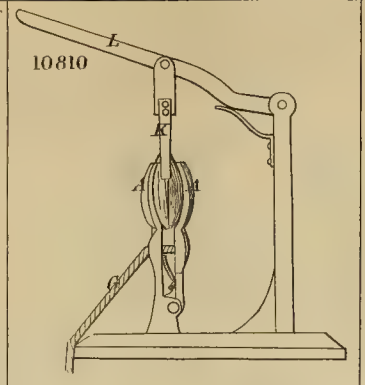

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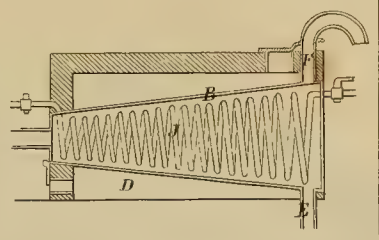

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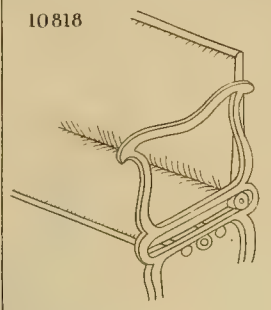

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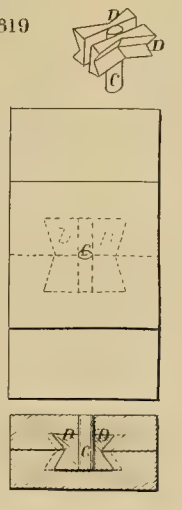

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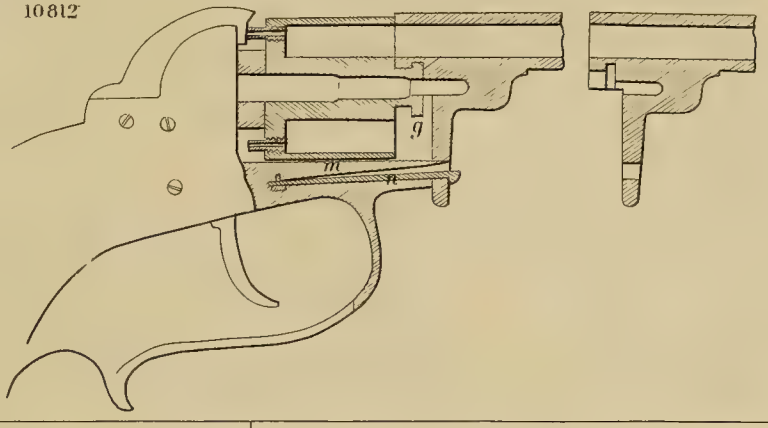

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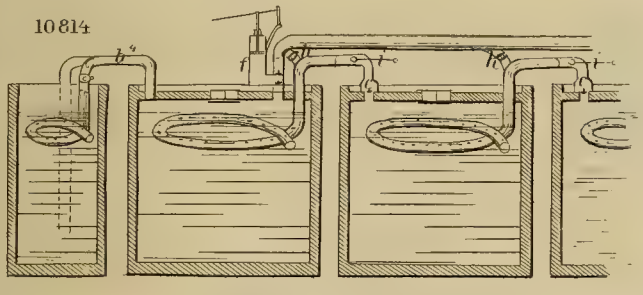

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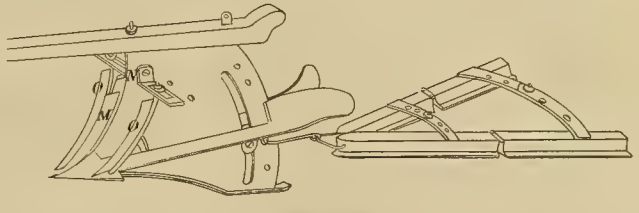

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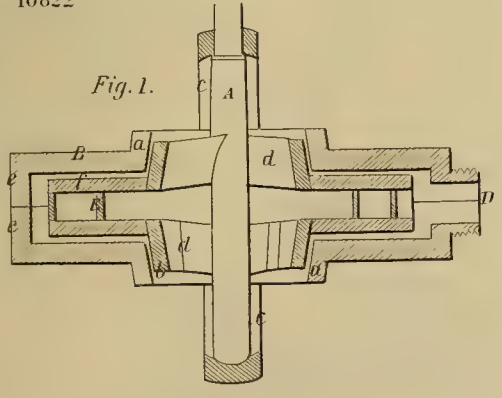

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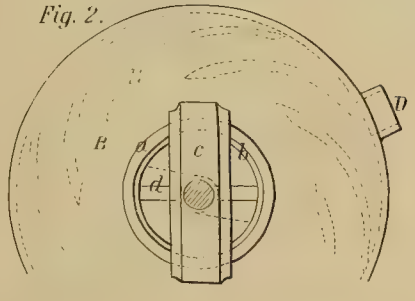

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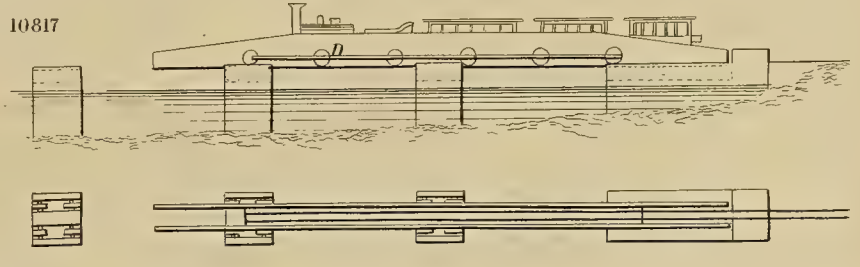

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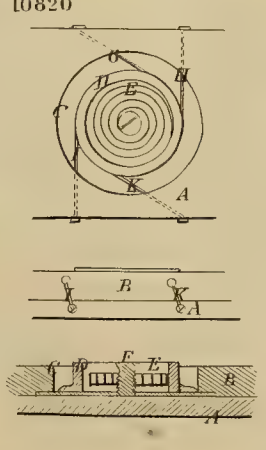

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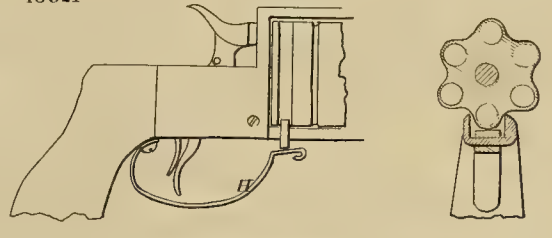

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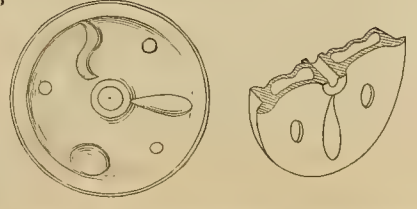

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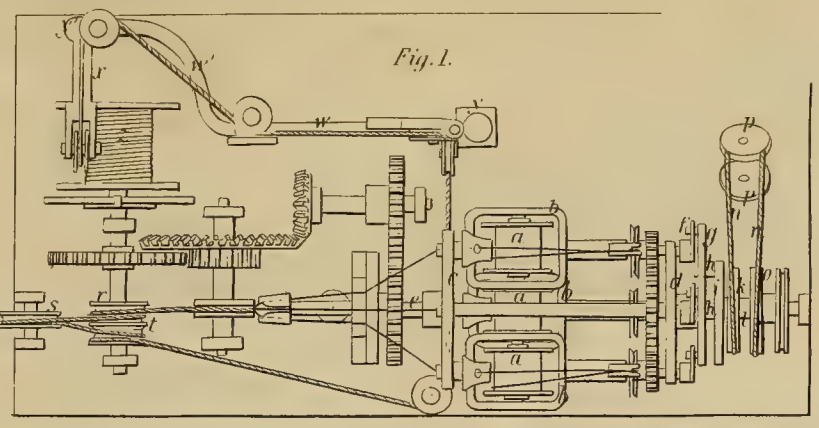

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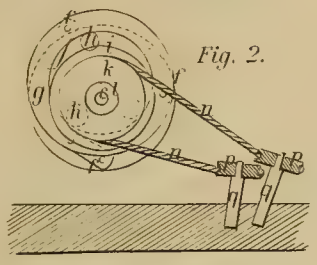

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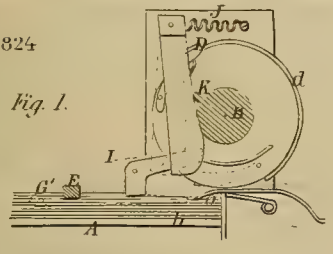

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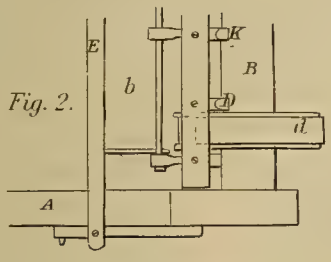

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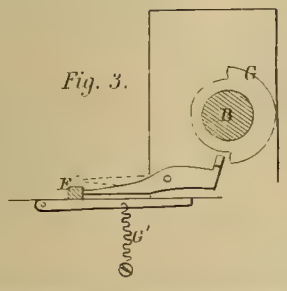

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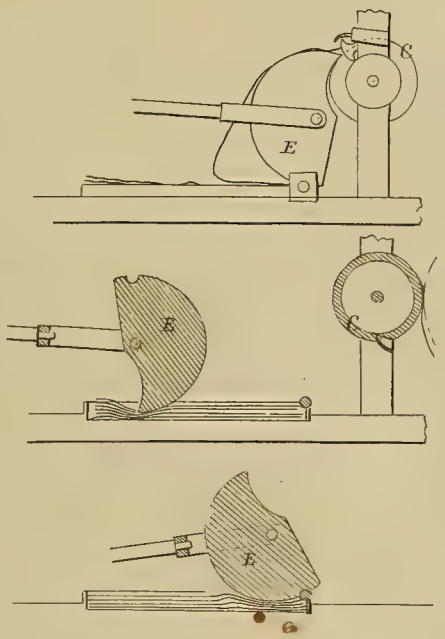

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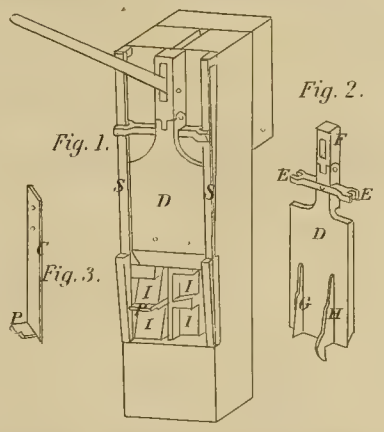

Fig. 1.

Fig. 2.

Fig. 3.

10829

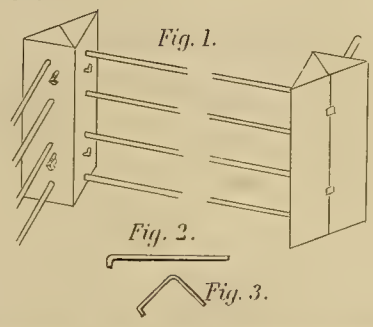

Fig. 1.

Fig. 2.

Fig. 3.

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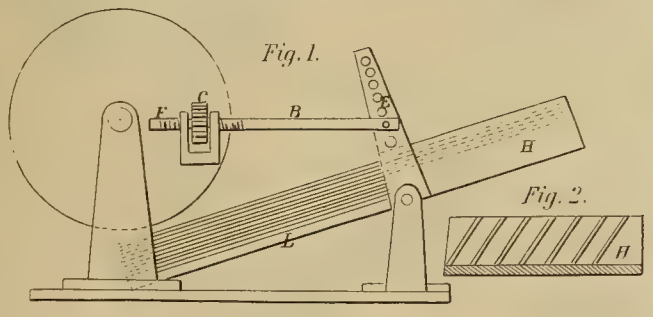

Fig. 1.

Fig. 2.

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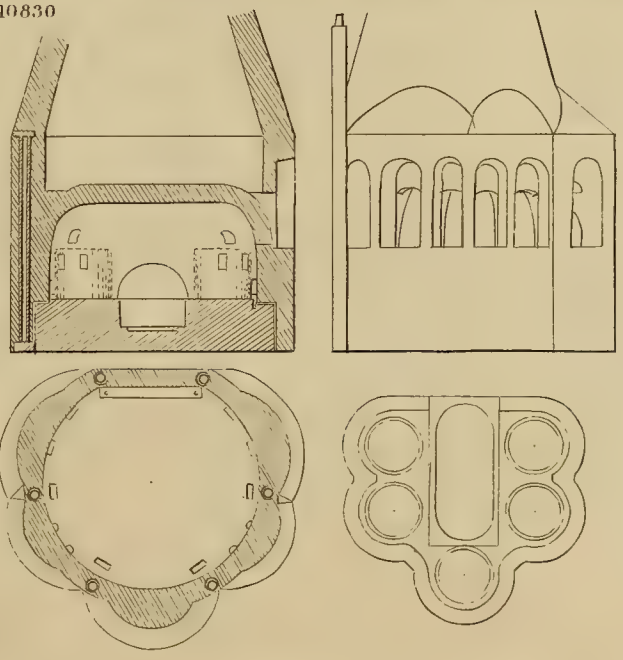

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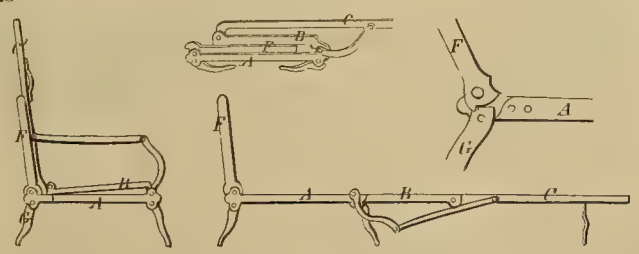

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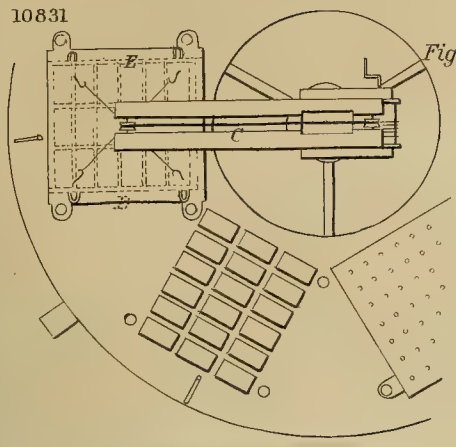

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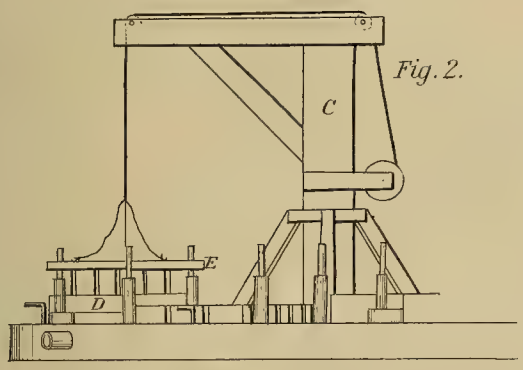

Fig. 2.

Fig. 3.

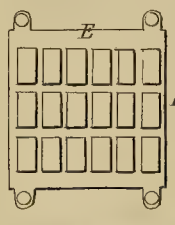

Fig. 4.

Fig. 5.

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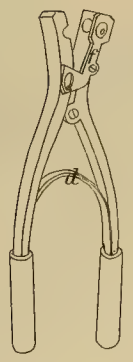

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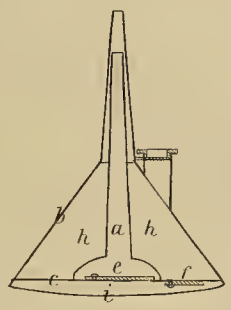

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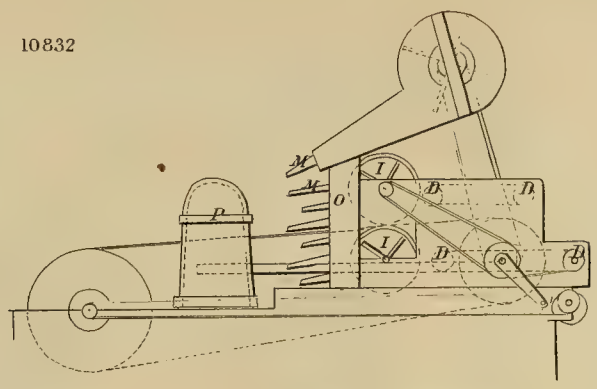

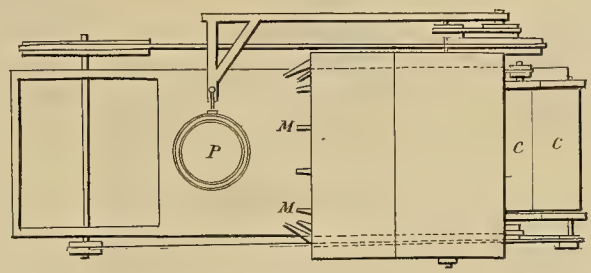

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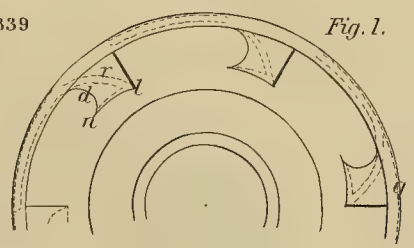

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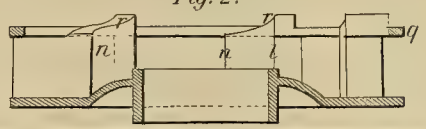

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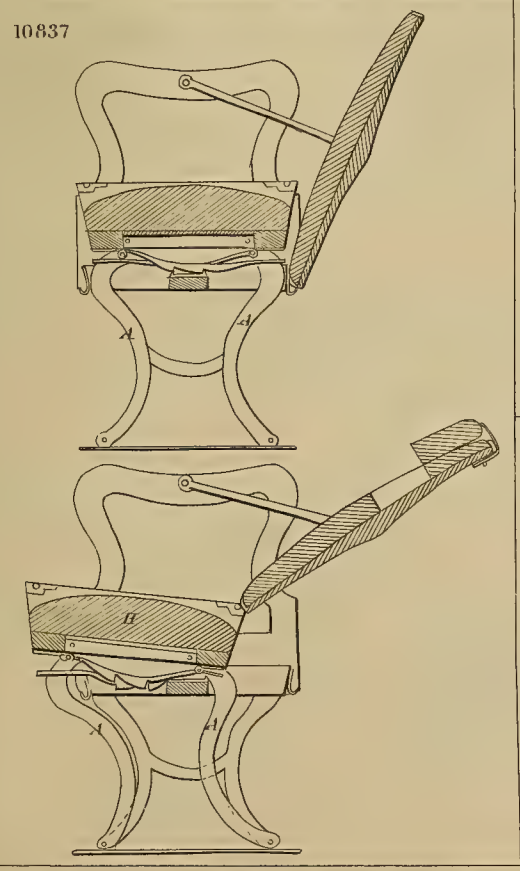

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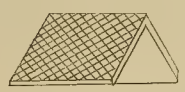

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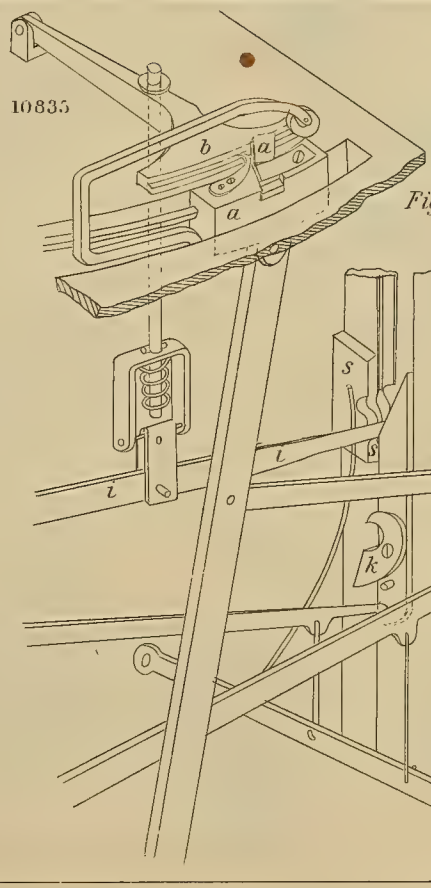

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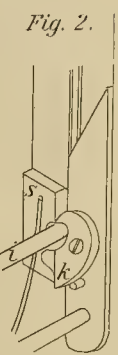

Fig. 2.

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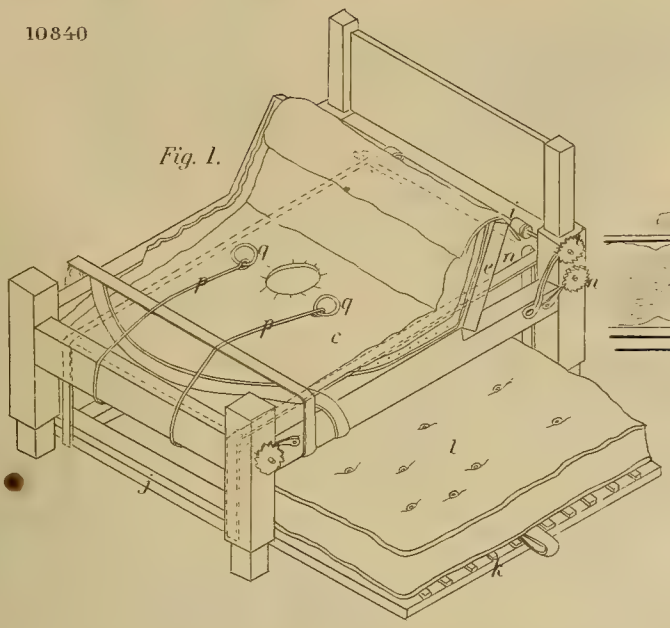
Fig. 1.



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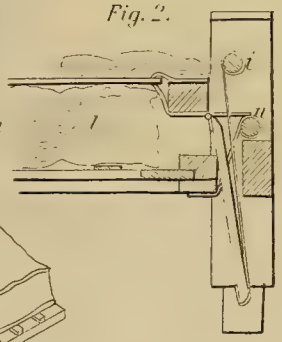

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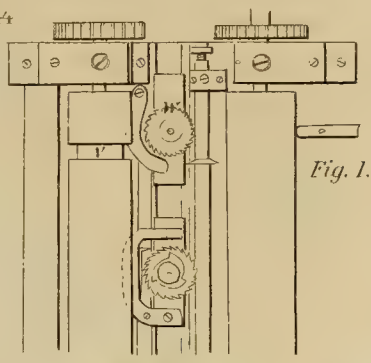

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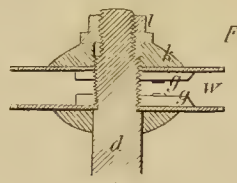

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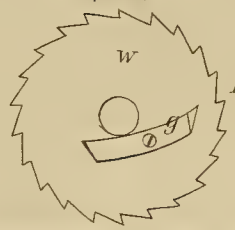

Fig. 3.

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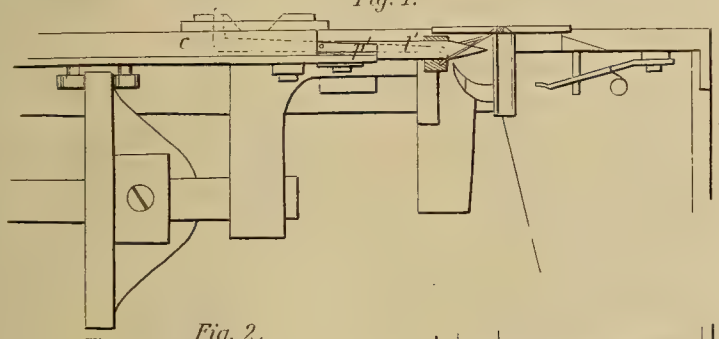

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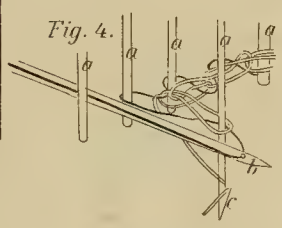

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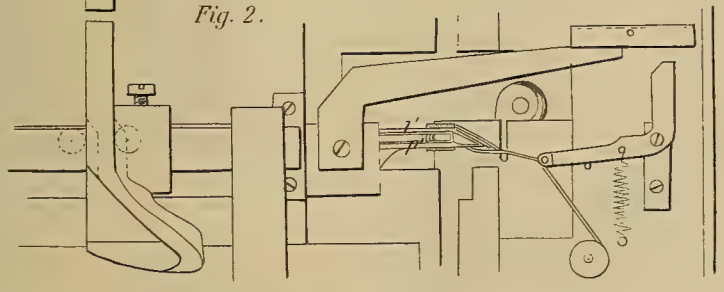
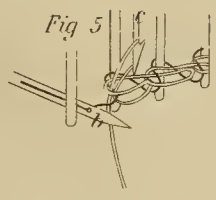


Fig 5



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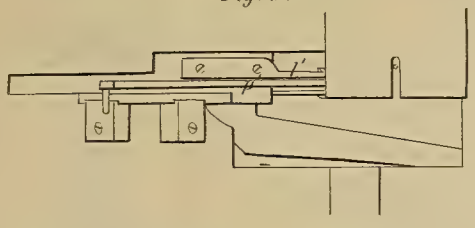

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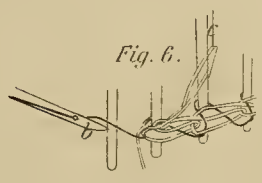

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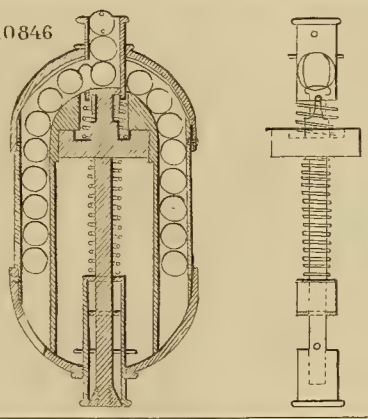

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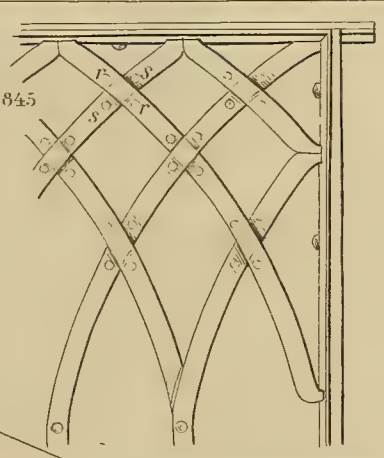

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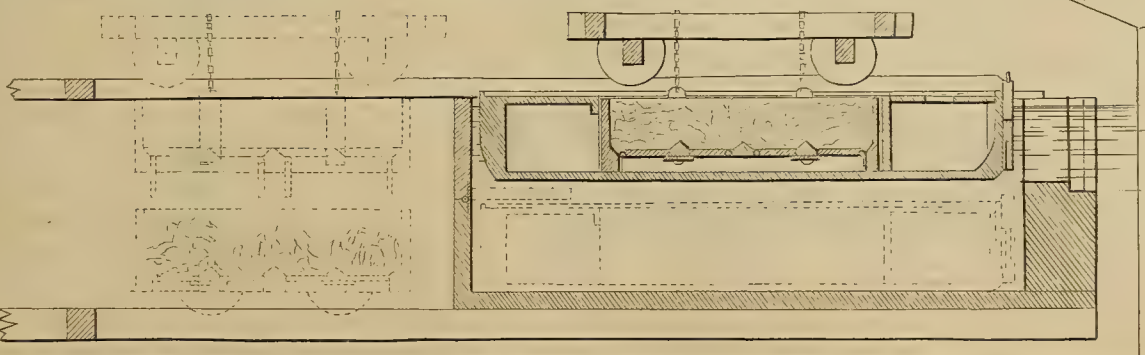

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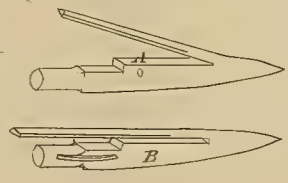

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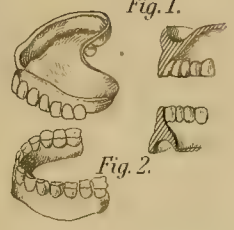

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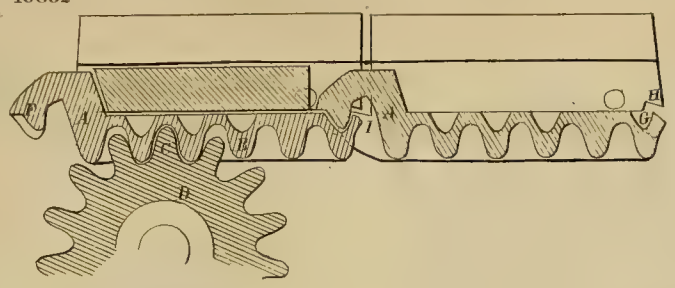

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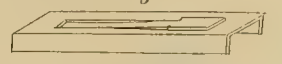

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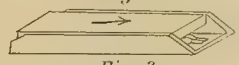

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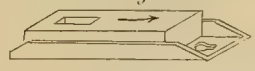

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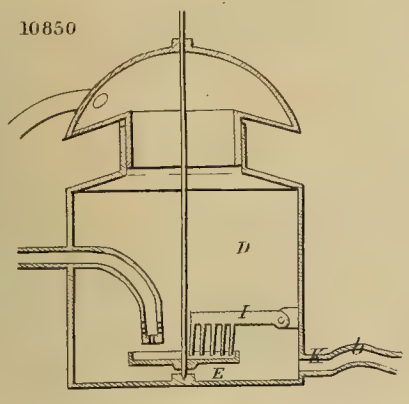

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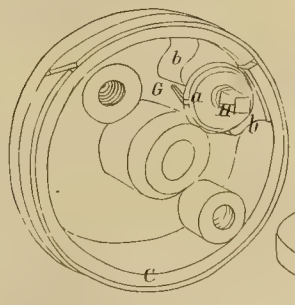

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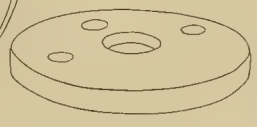

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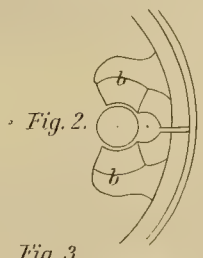

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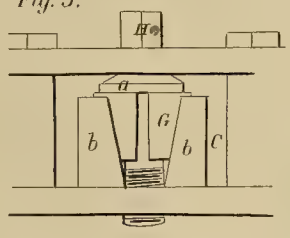

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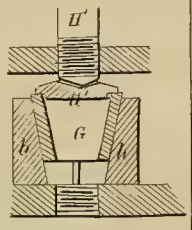

Fig. 5.

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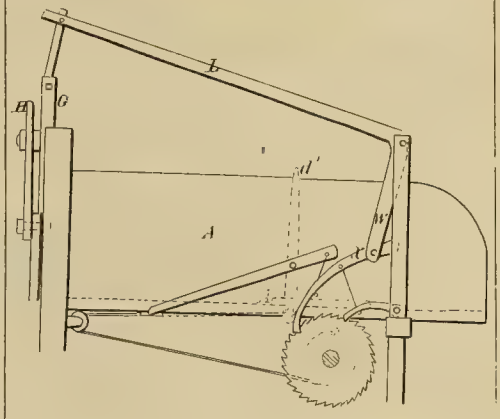

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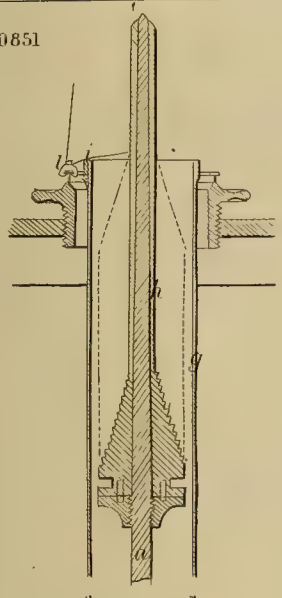

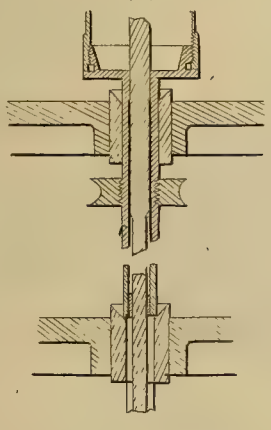

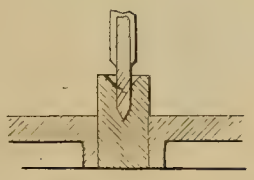

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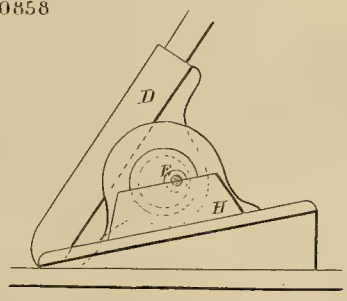

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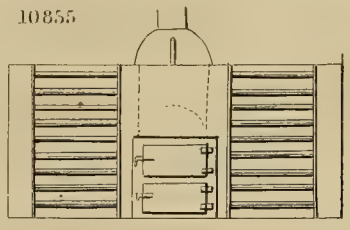

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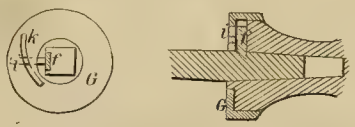

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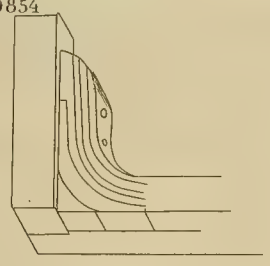

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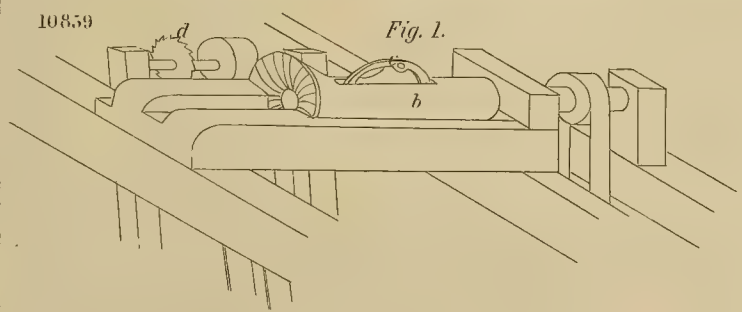

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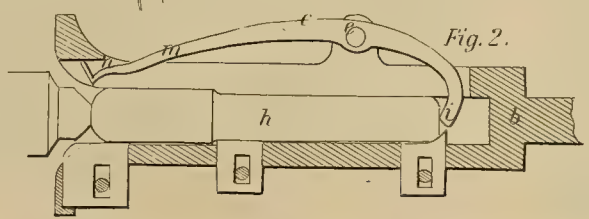

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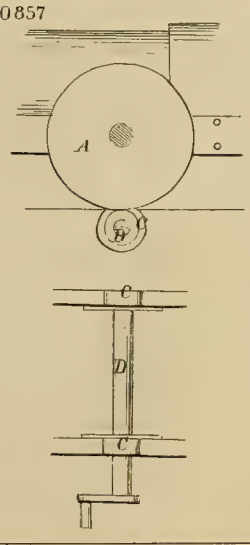

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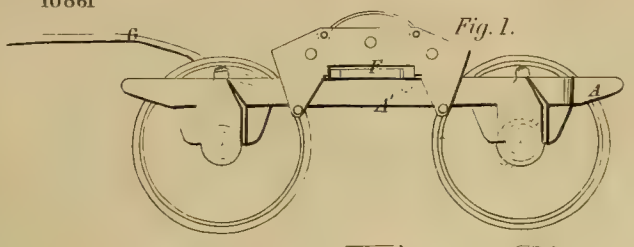

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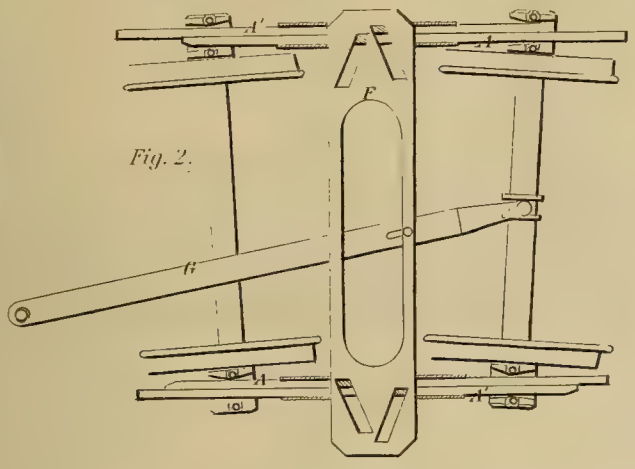
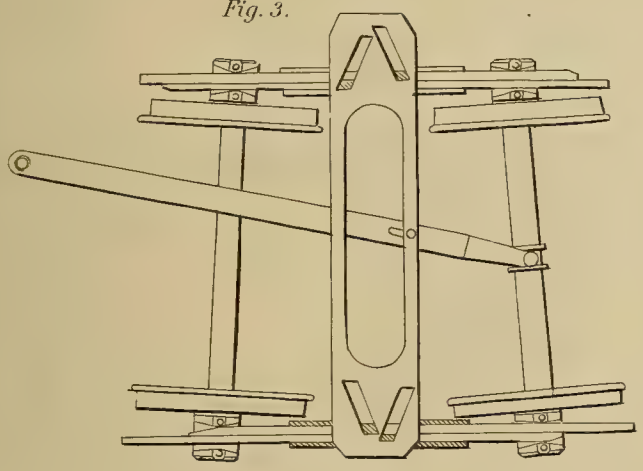


Fig. 2.

Fig. 3.



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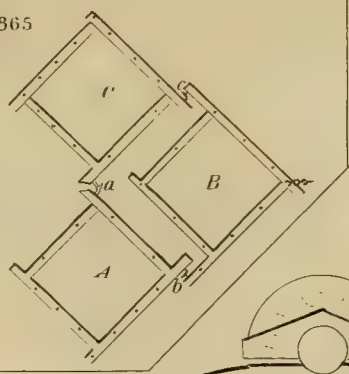

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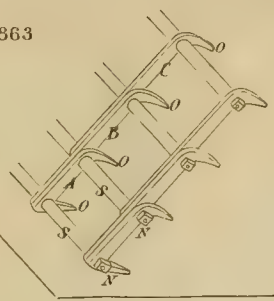

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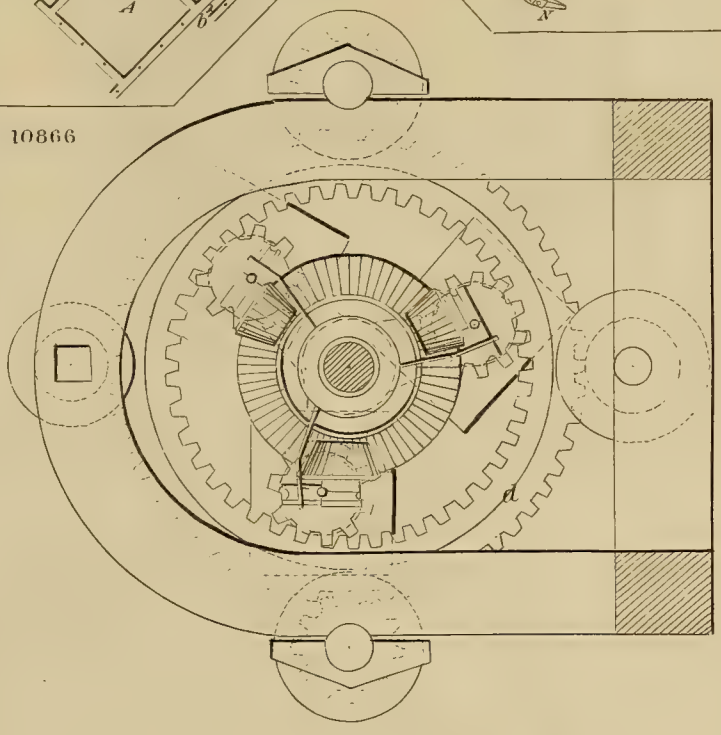

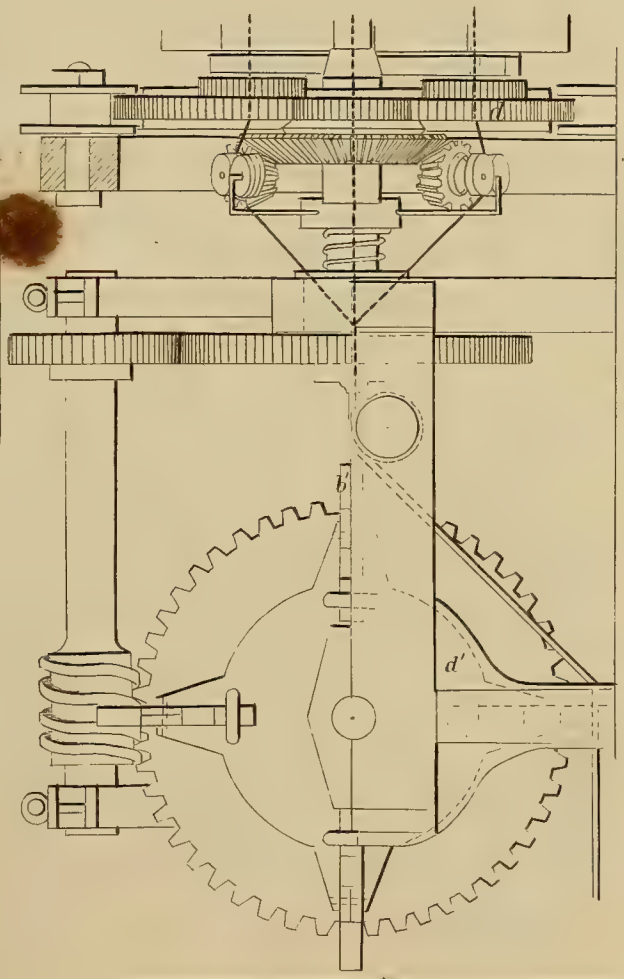

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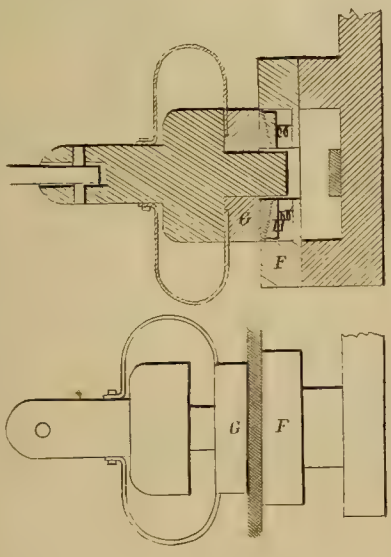

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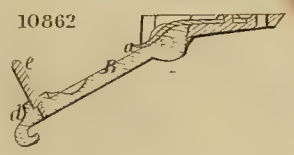

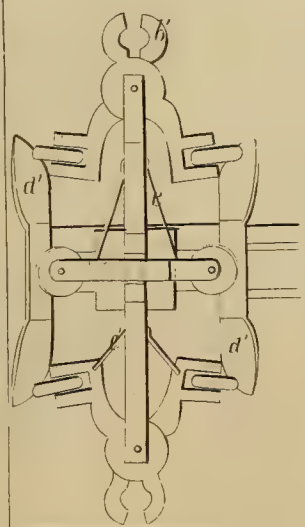

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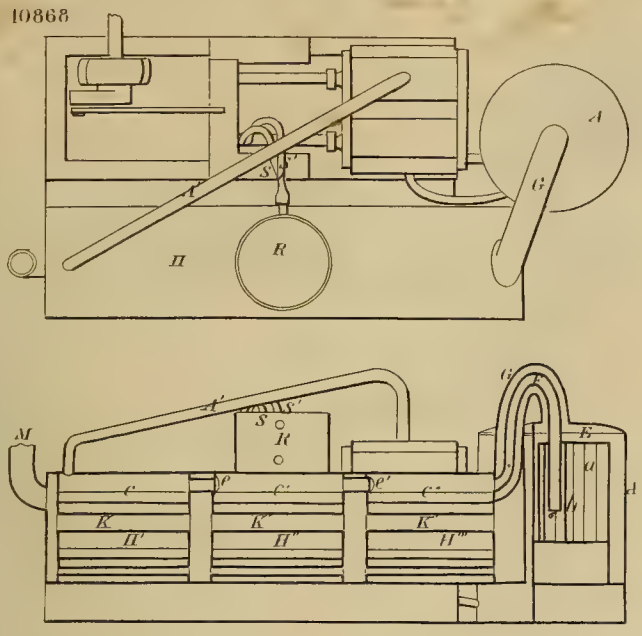

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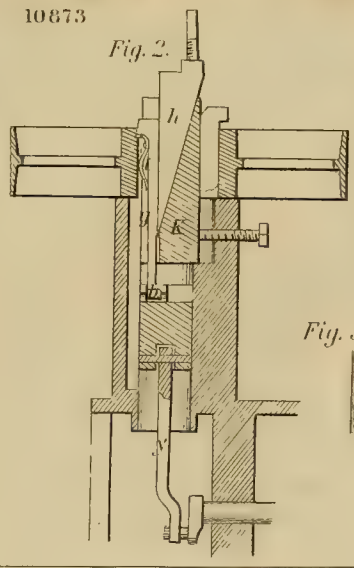

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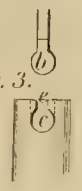

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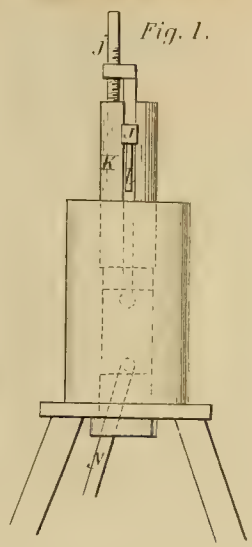

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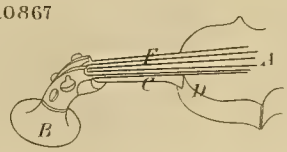

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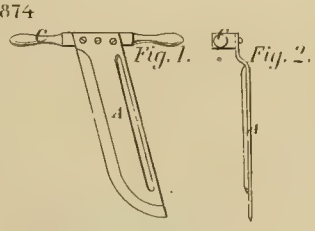

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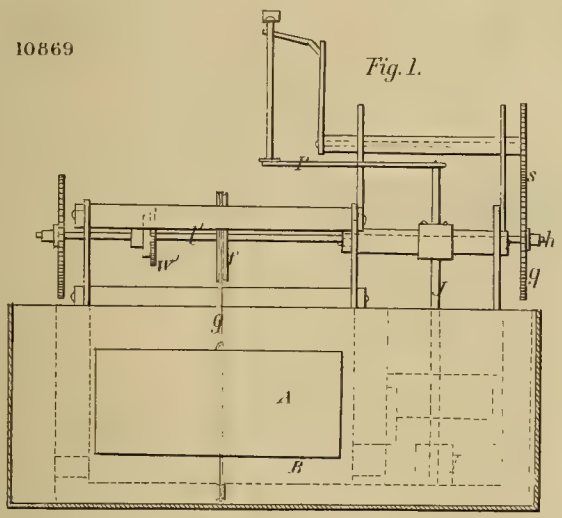

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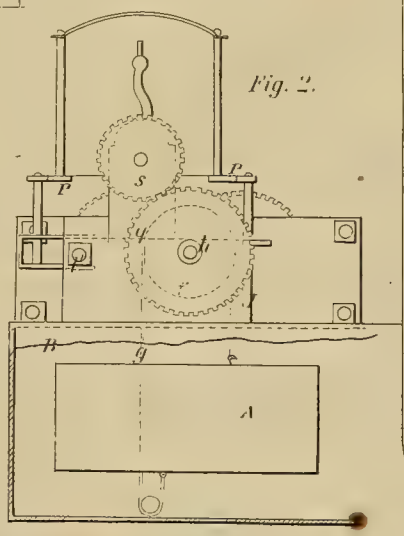

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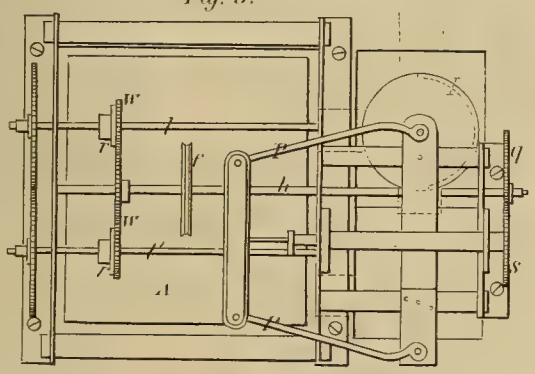

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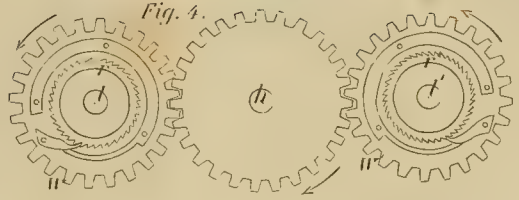

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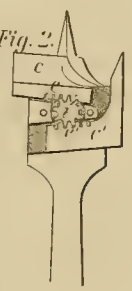

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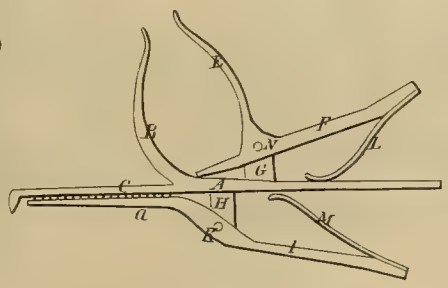

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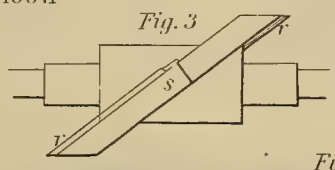

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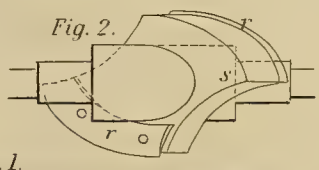

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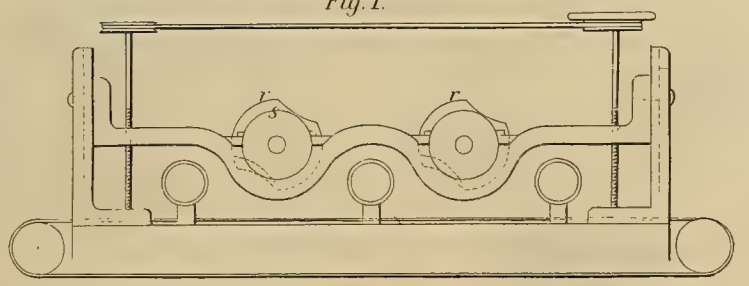

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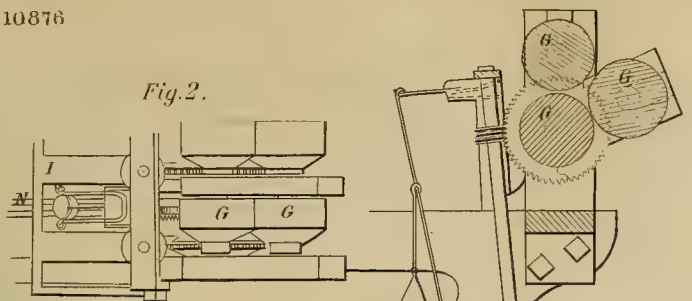

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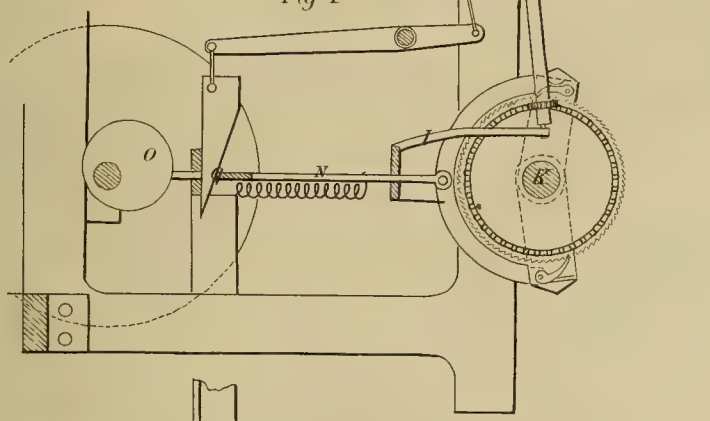

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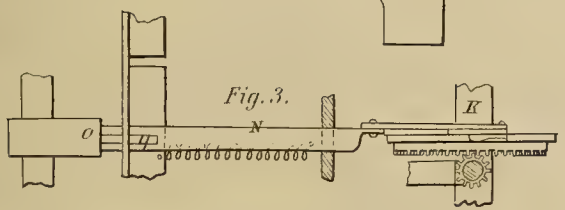

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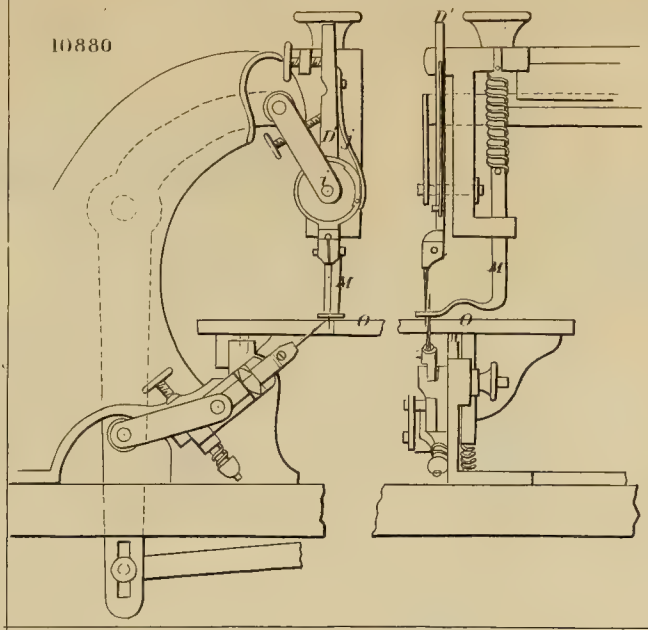

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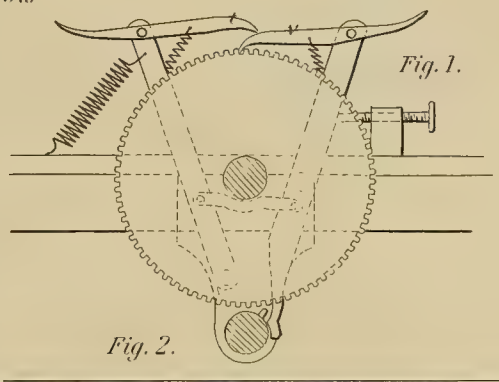

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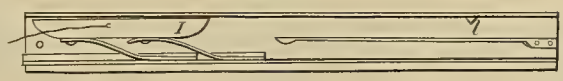

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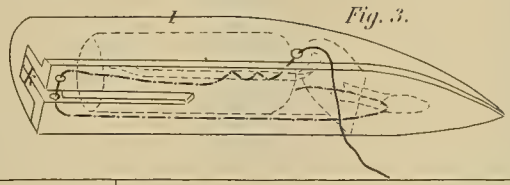

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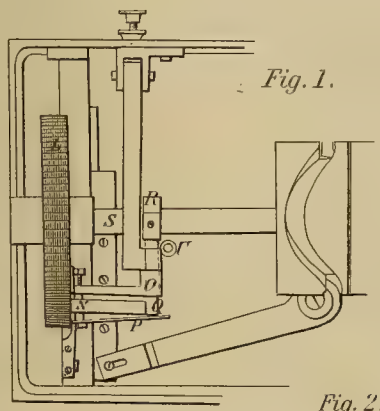

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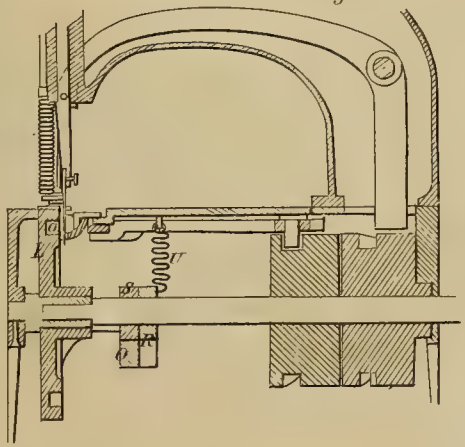

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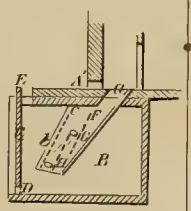

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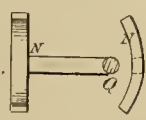

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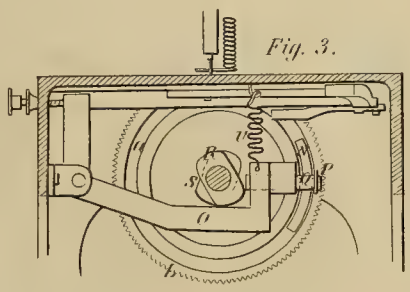

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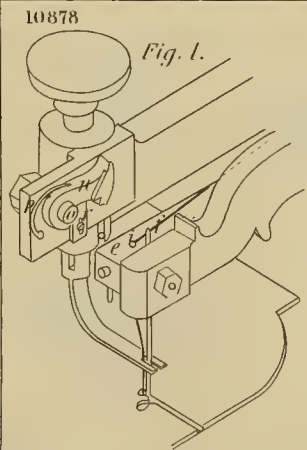

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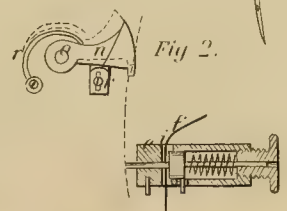

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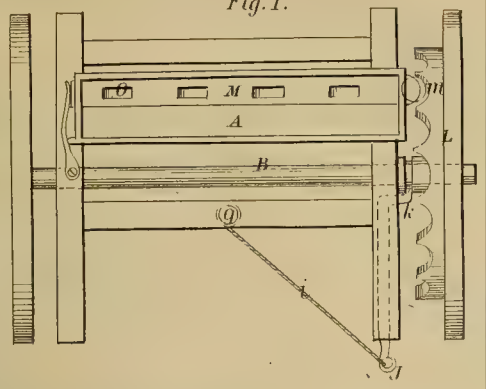

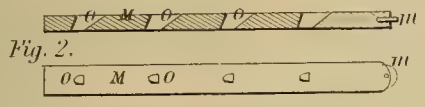

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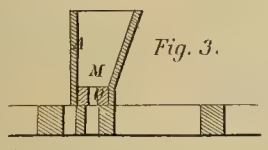

Fig. 3.

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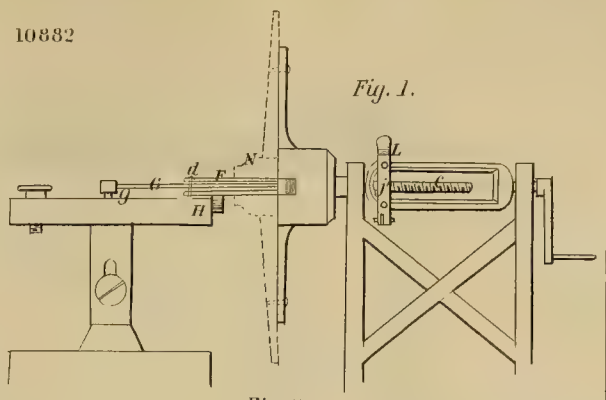

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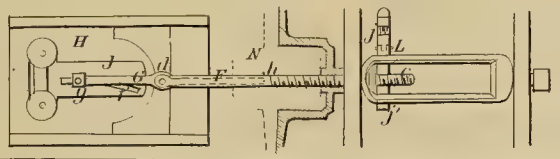

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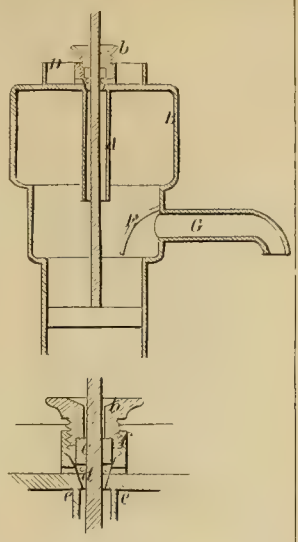

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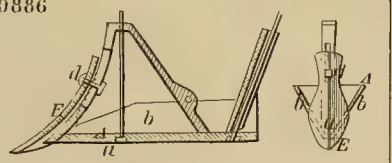

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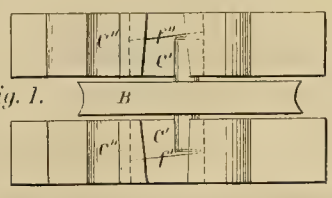

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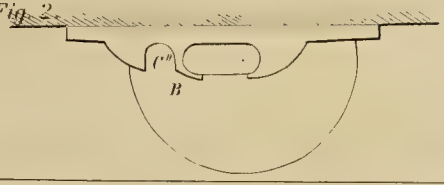

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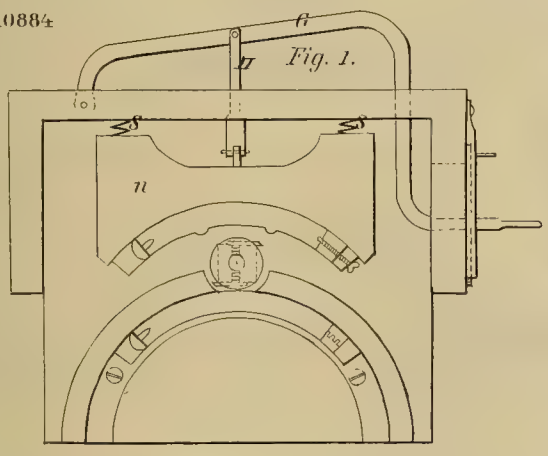

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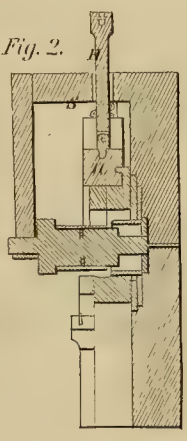

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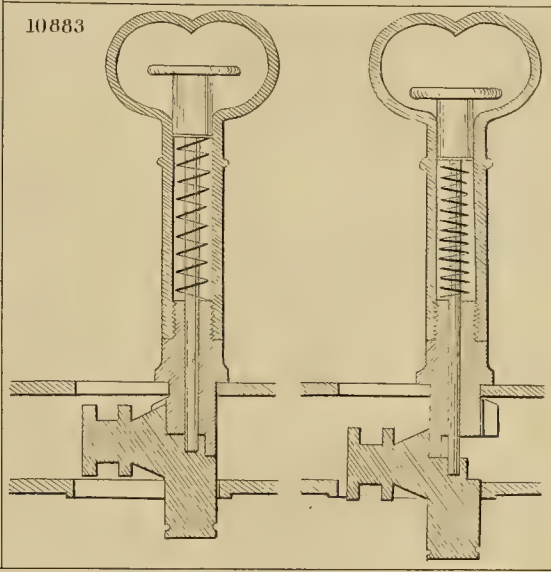

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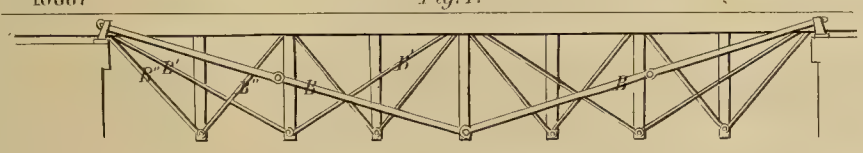

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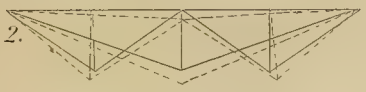

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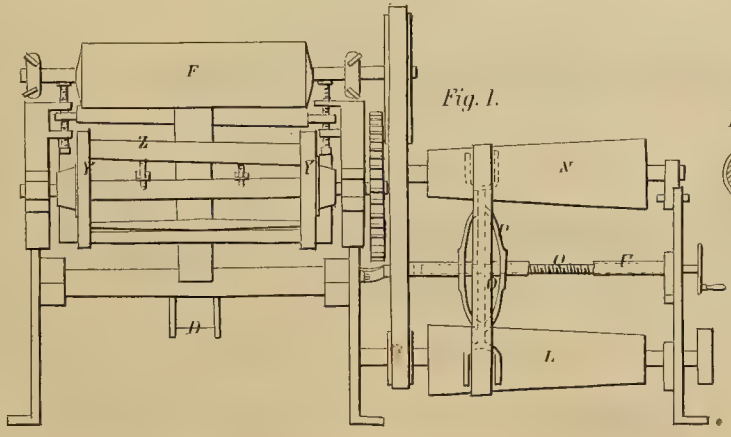

Fig. 1.

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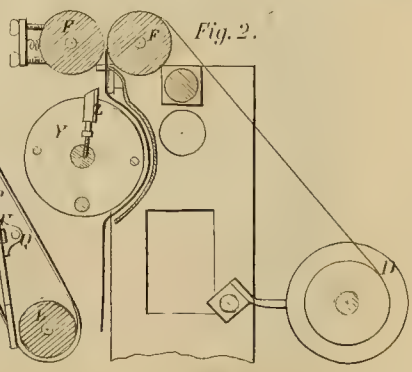

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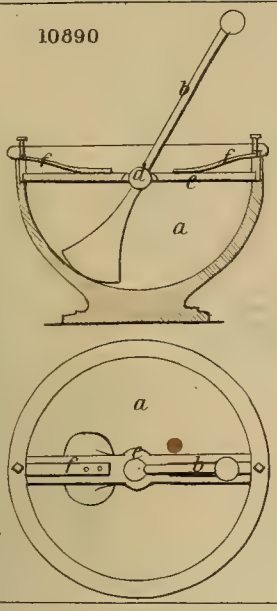

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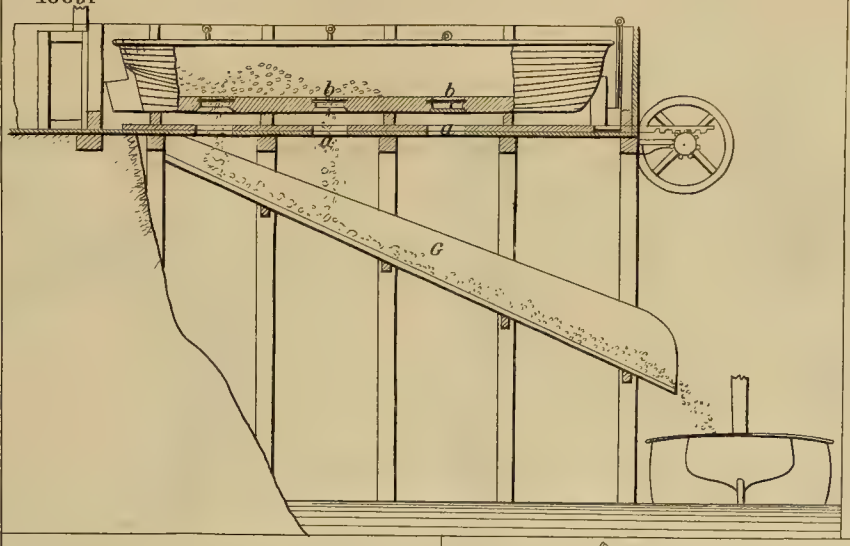

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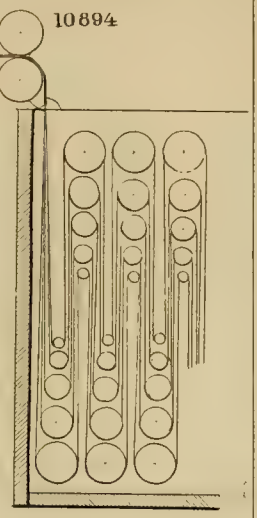

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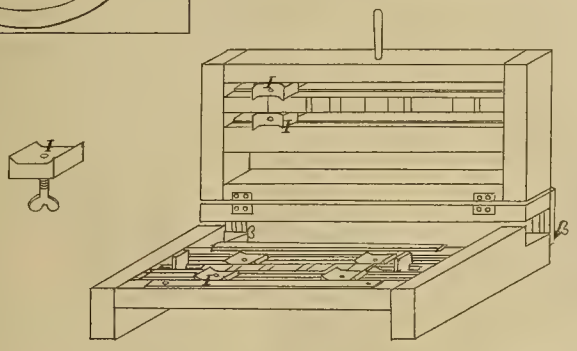

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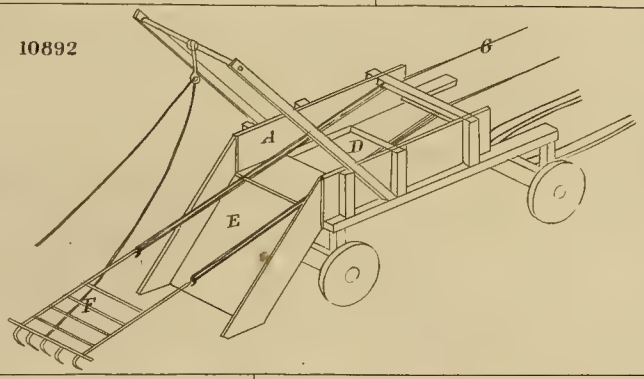

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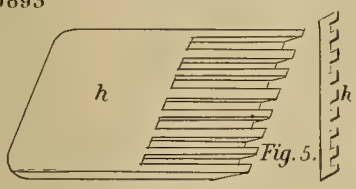

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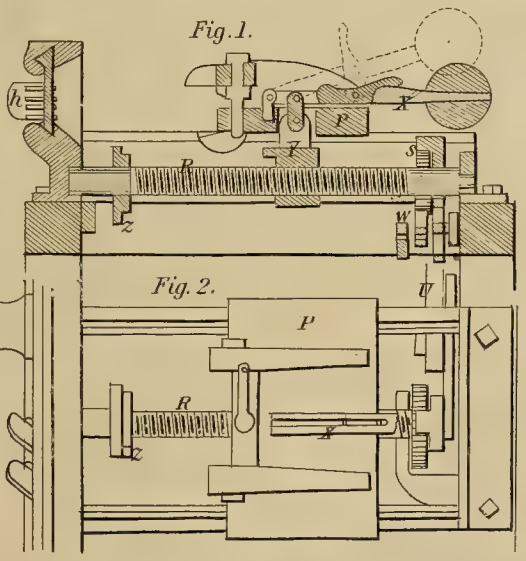

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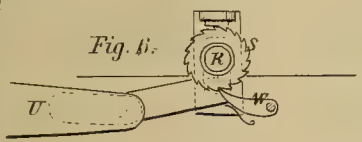

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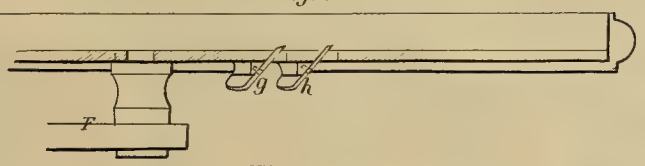

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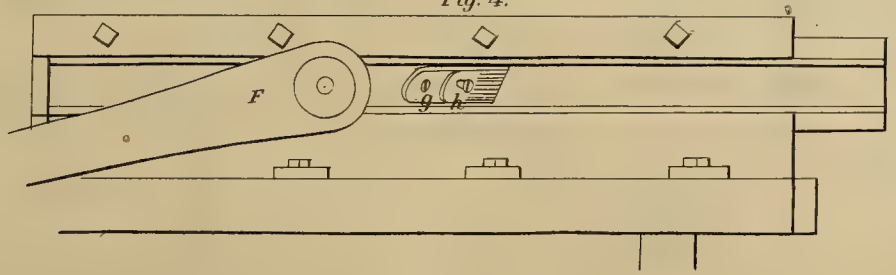

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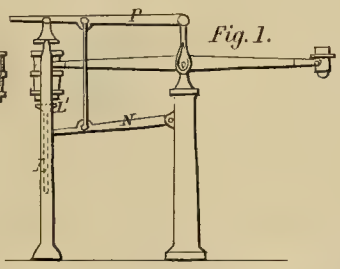

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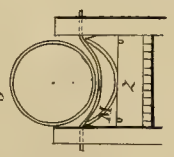

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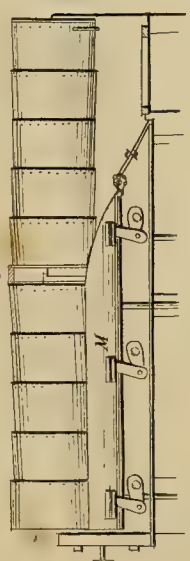

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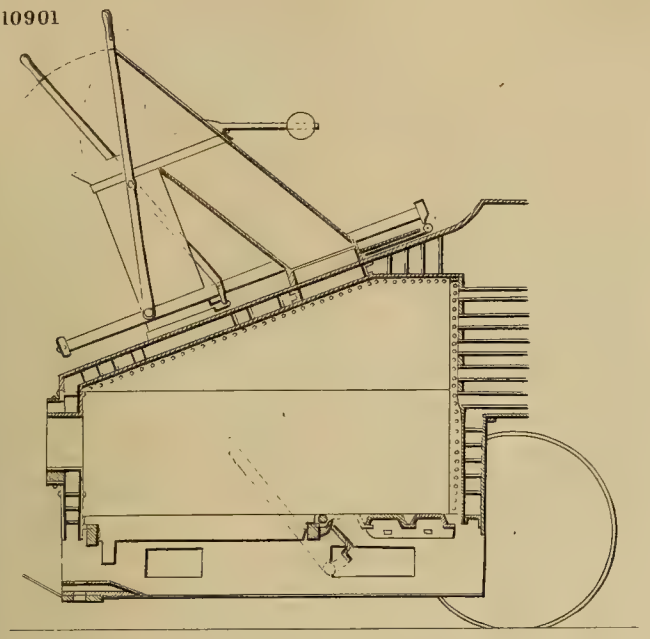

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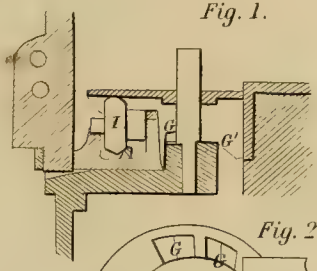

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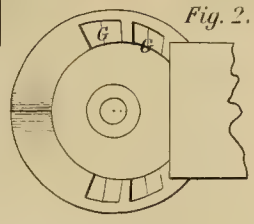

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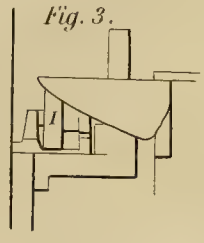

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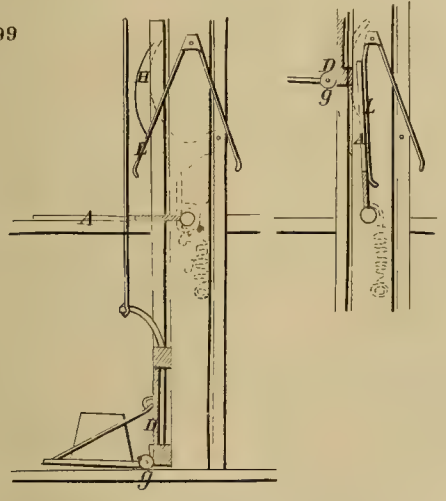

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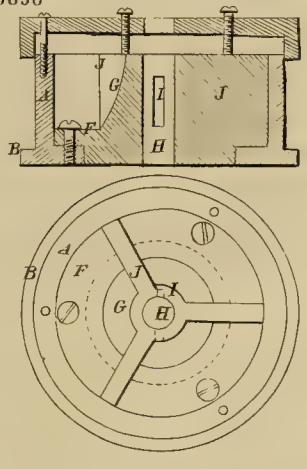

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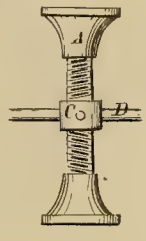

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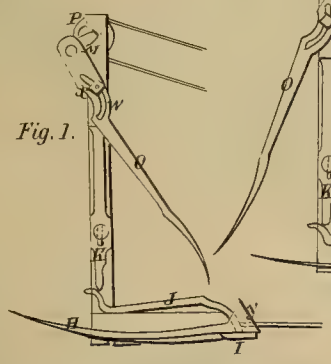

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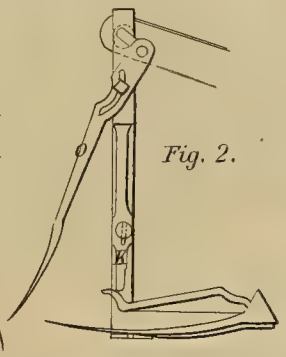

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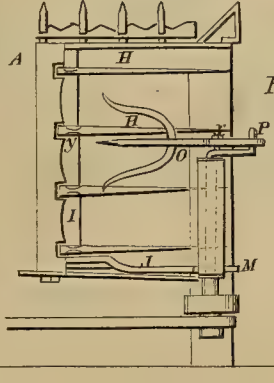

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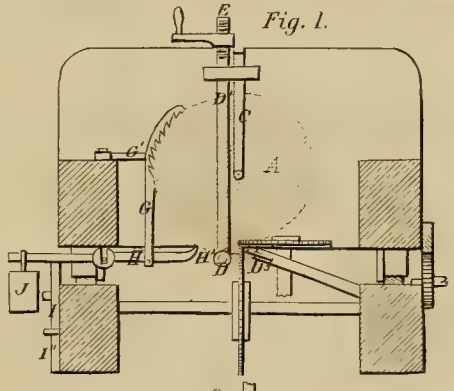

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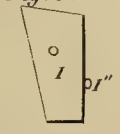

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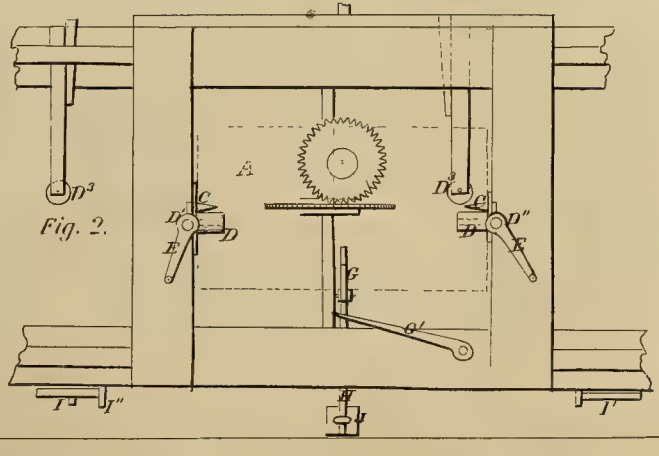

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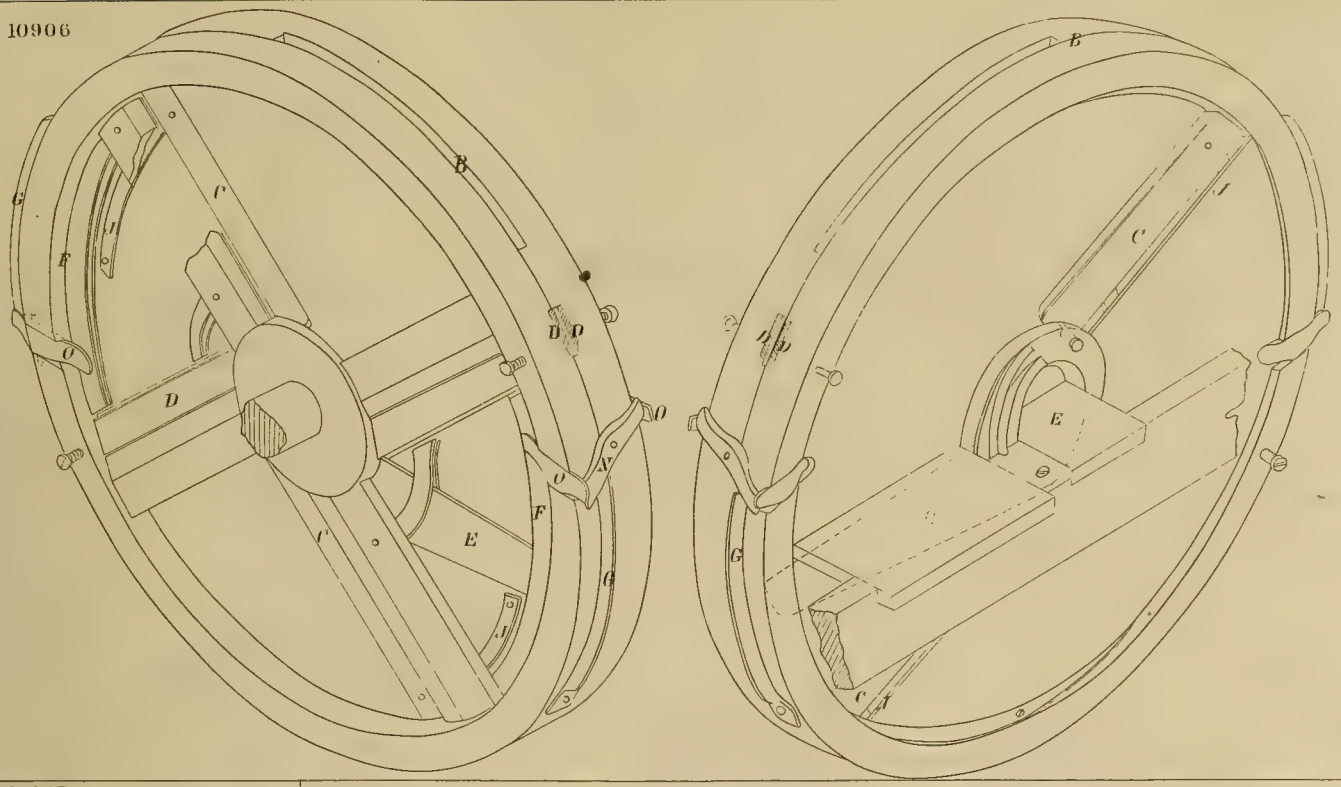

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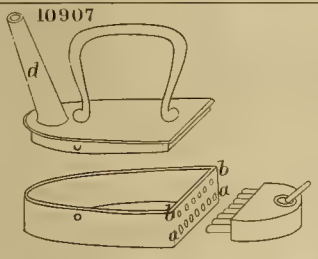

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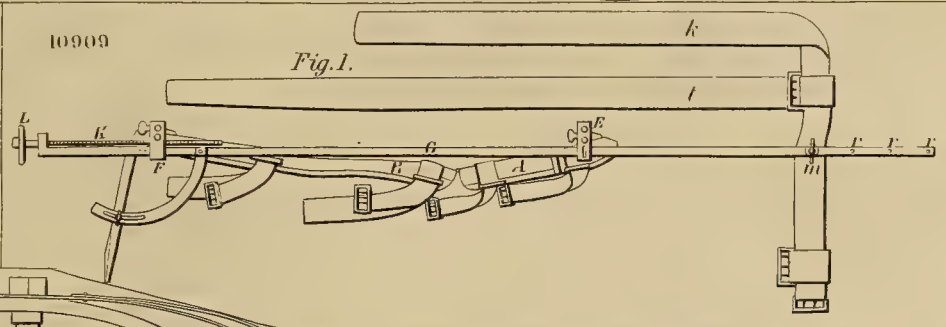

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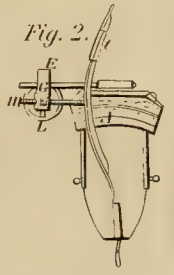

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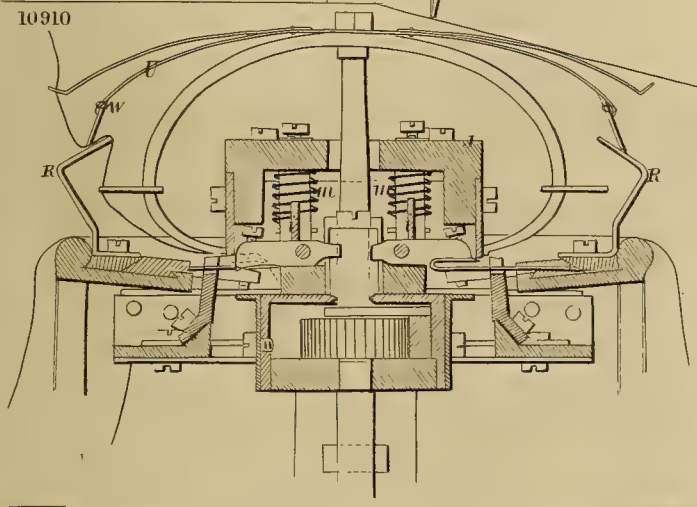

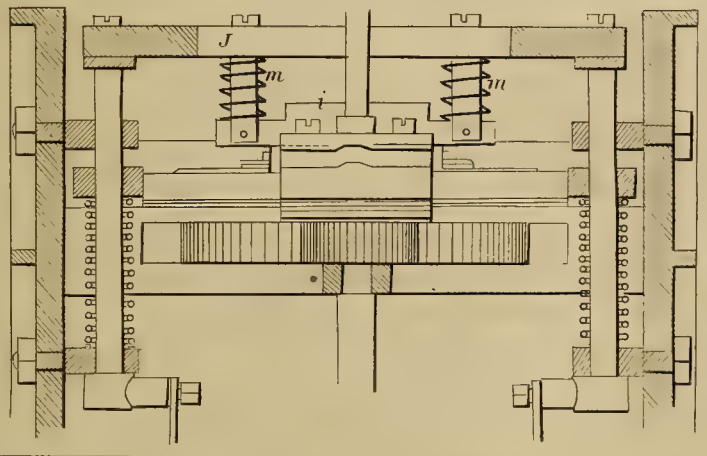

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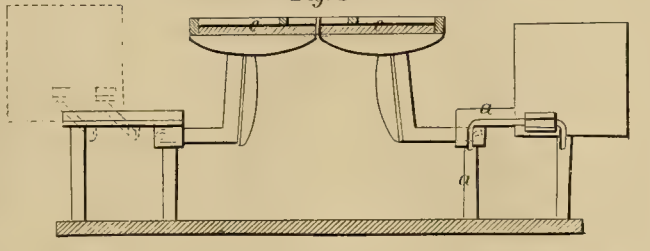

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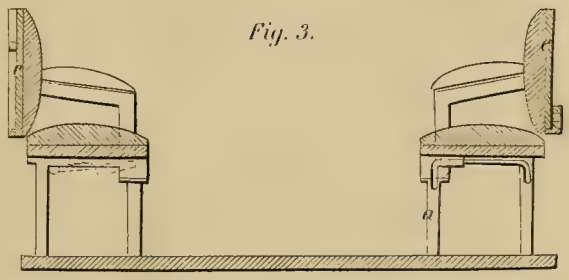

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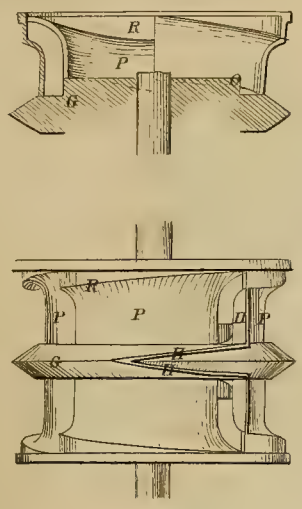

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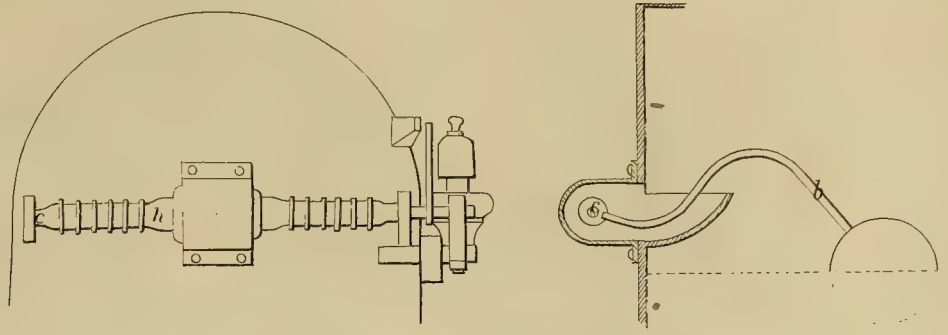

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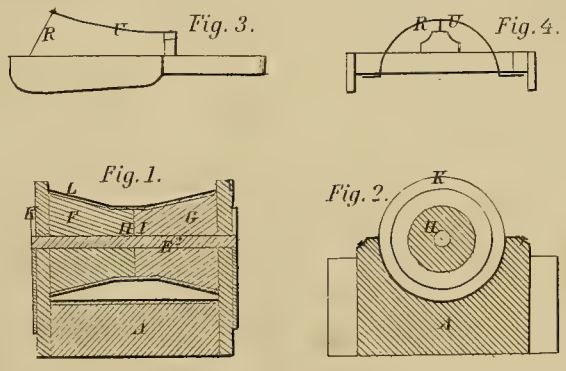

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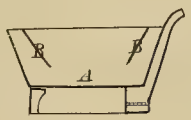

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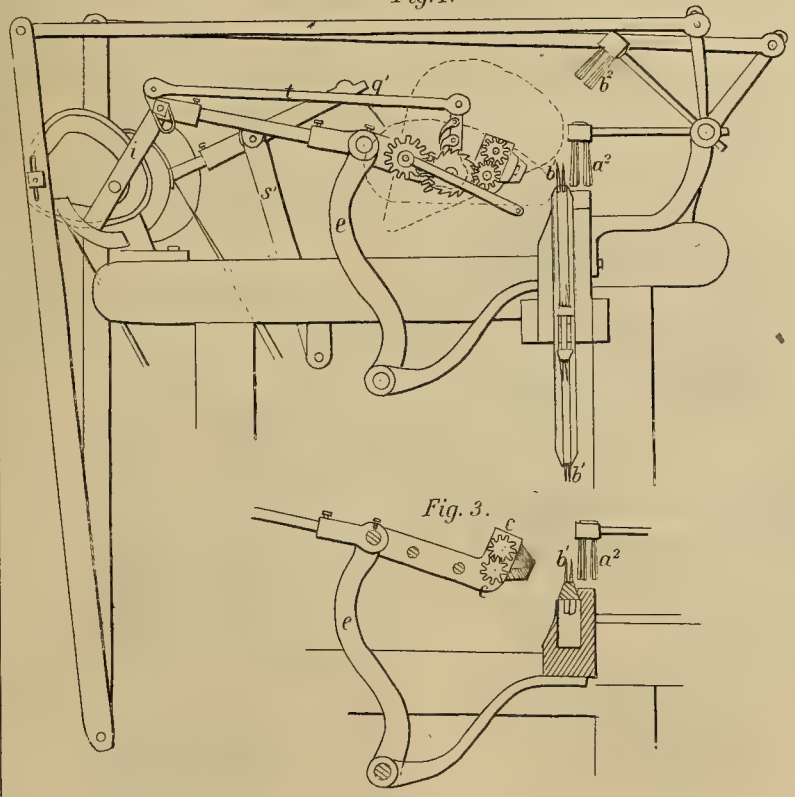

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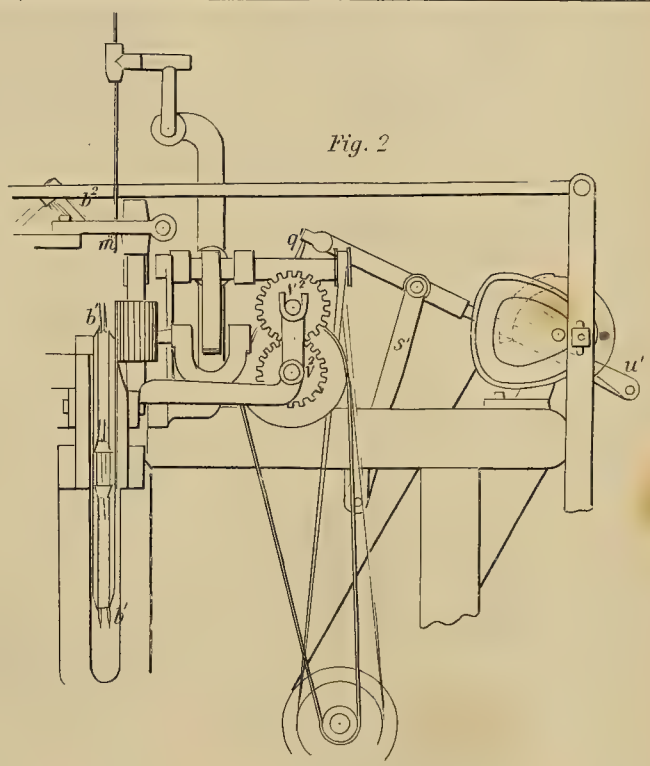
Fig. 2



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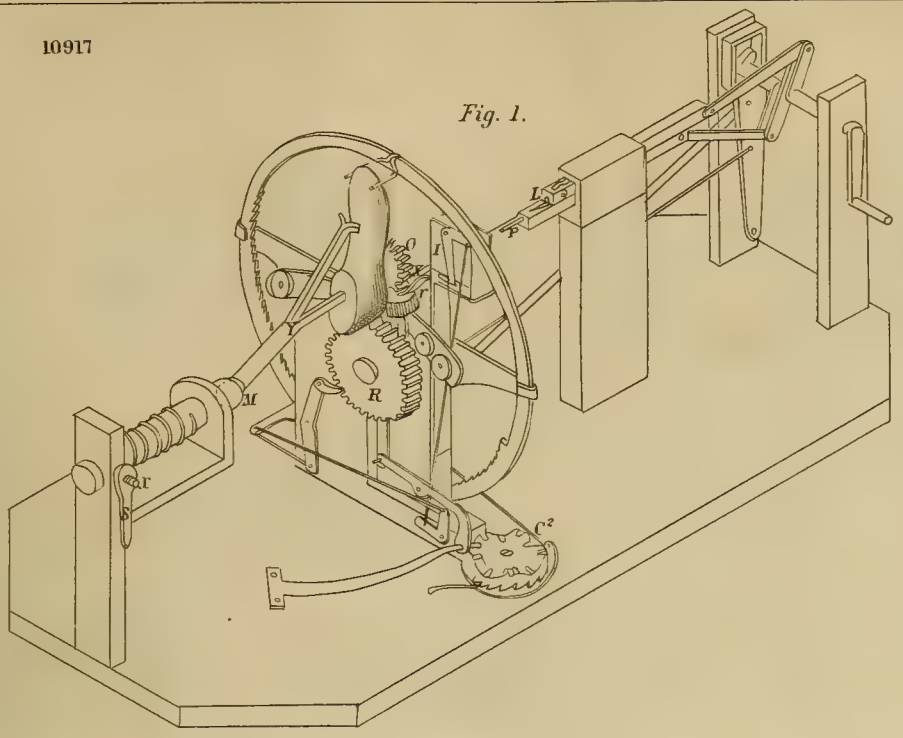

Fig 3

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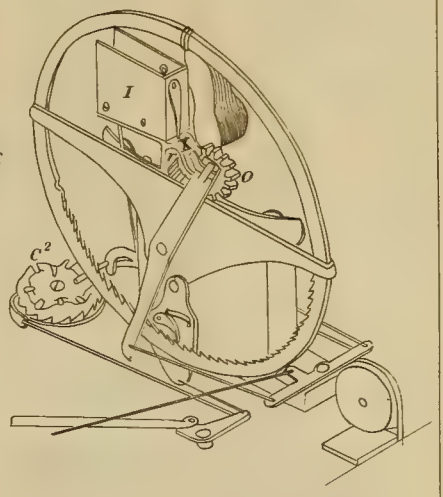

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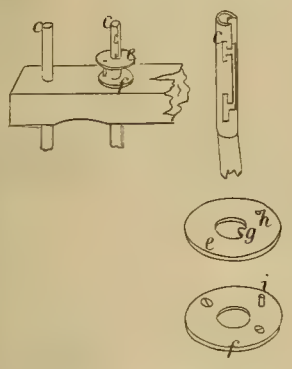

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Fig. 1.

Fig. 2.

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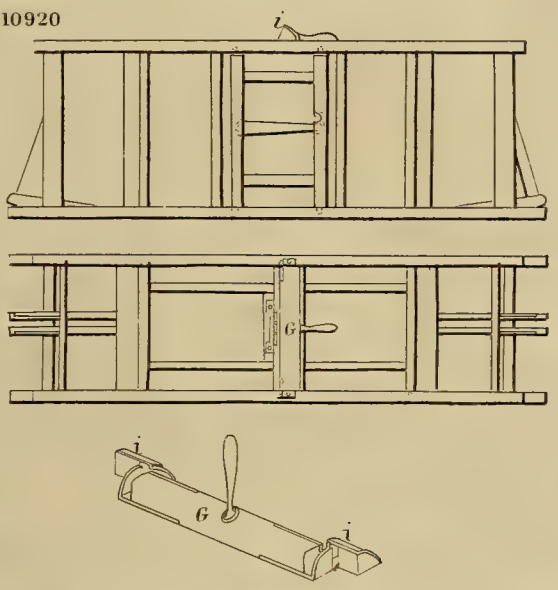

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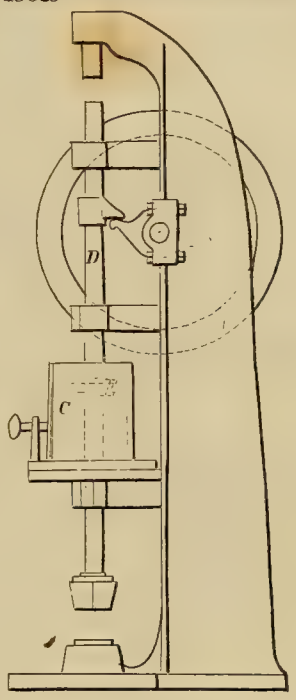

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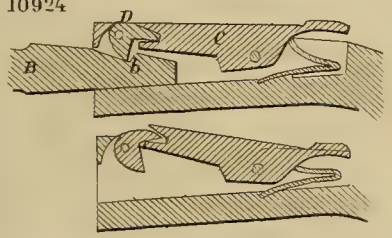

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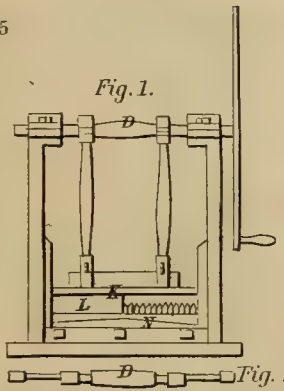

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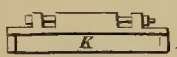

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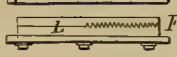

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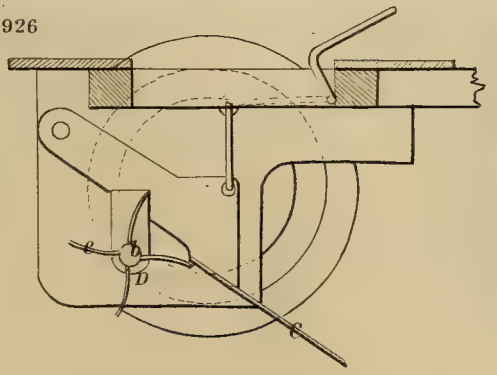

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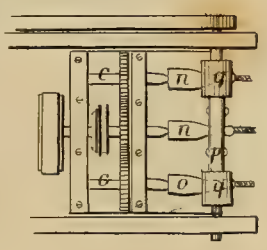

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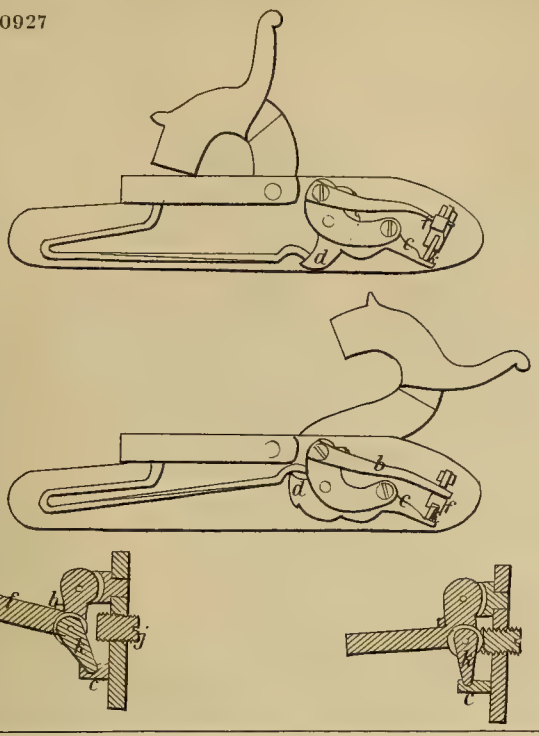

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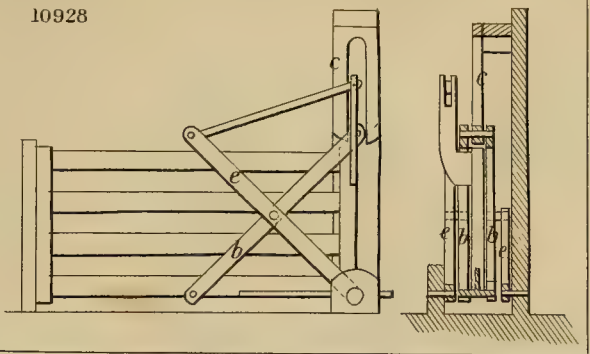

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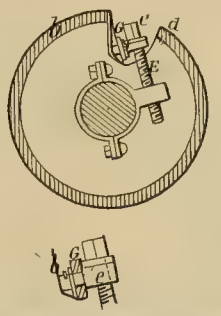

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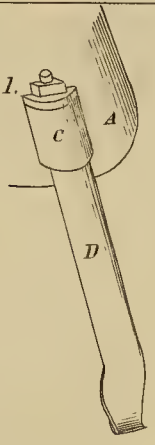

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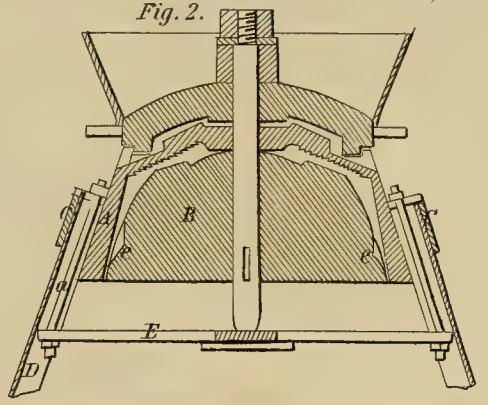

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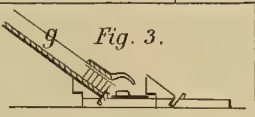

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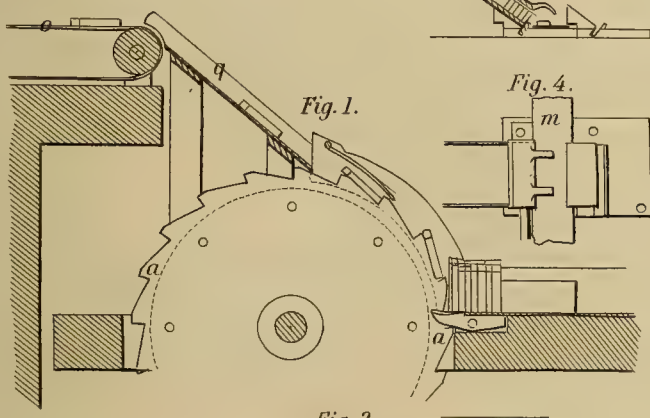
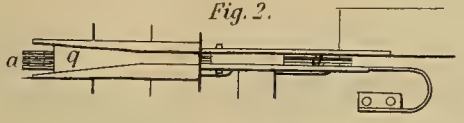


Fig. 4.

Fig. 2.



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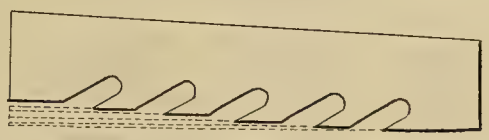

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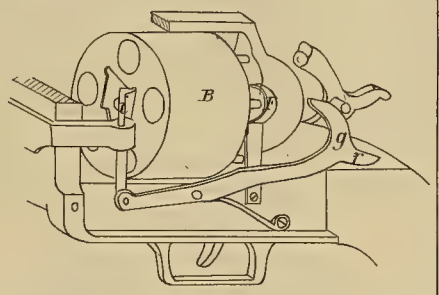

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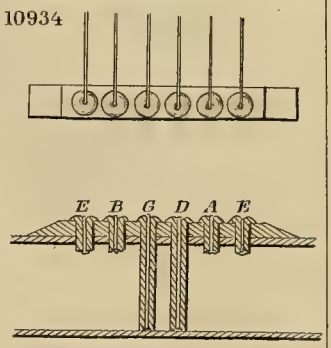

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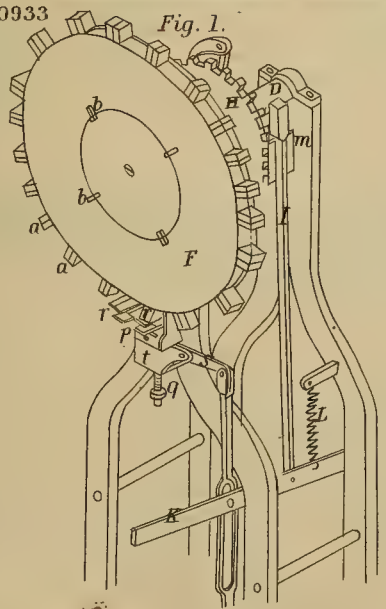

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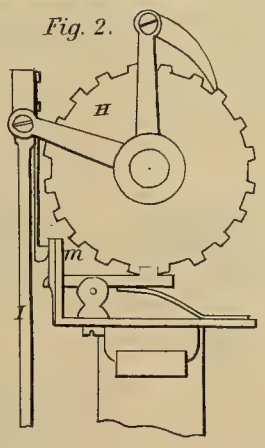

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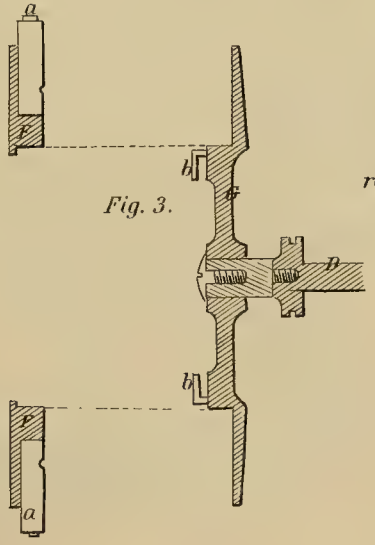
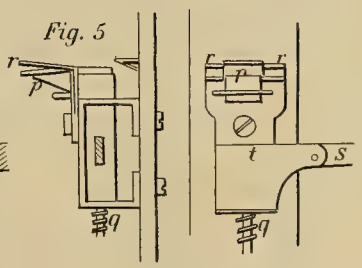


Fig 4

Fig. 5



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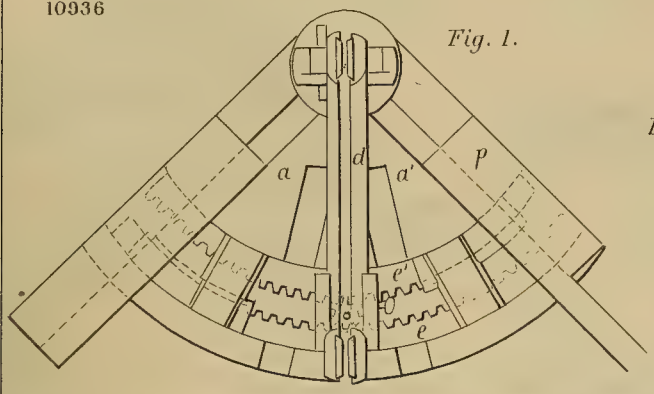

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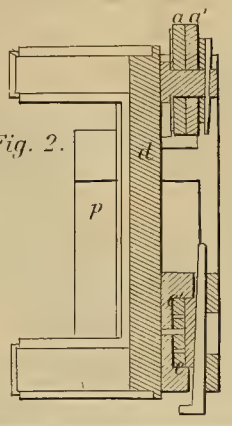

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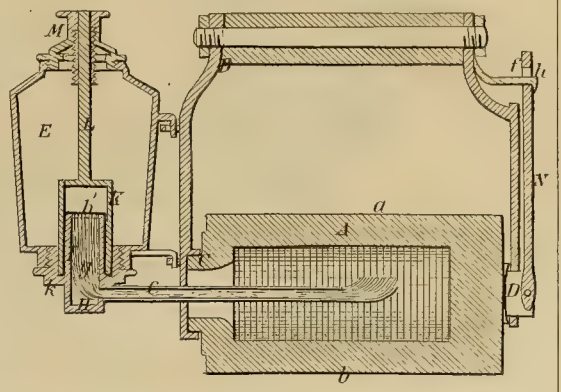

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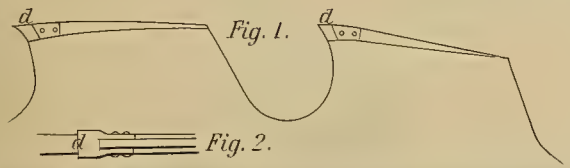

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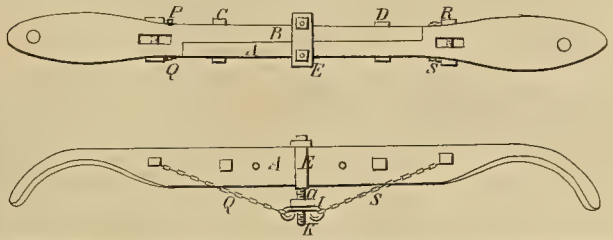

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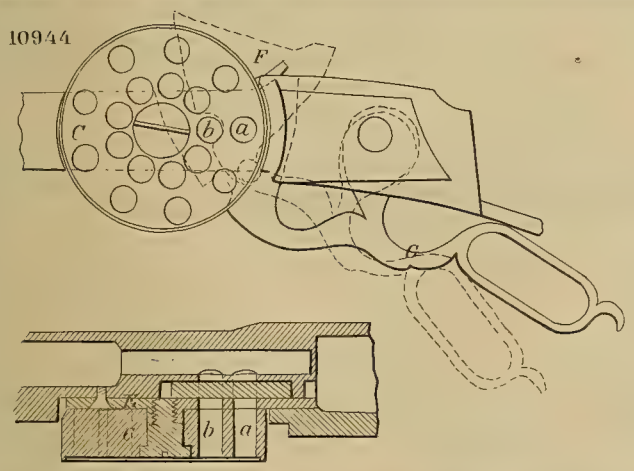

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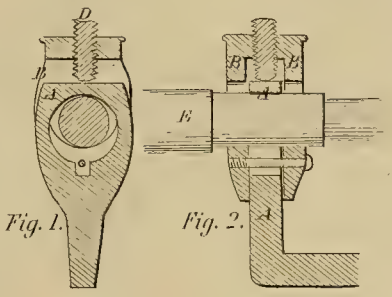

Fig. 1.

Fig. 2.

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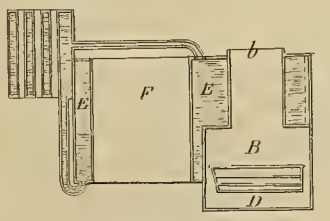

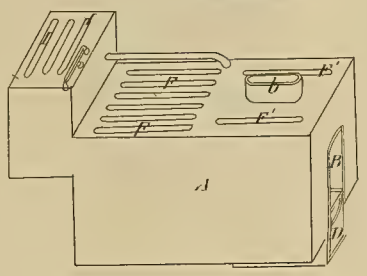

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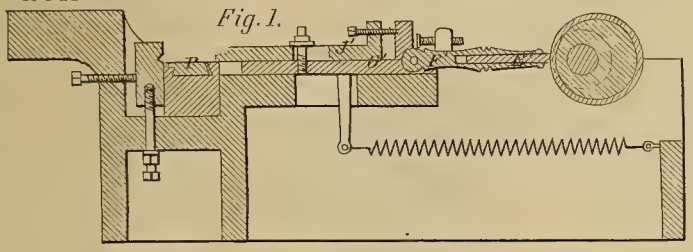

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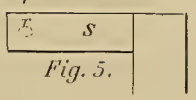

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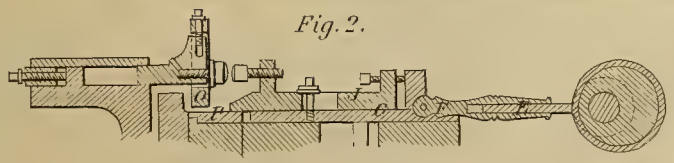

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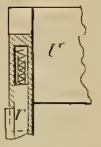

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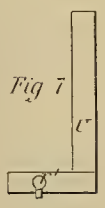

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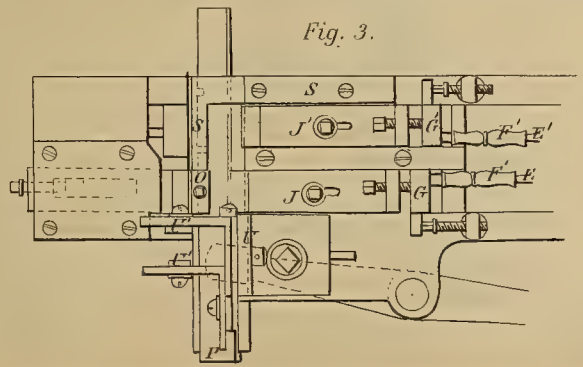

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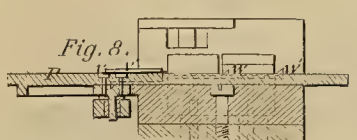

Fig. 9.

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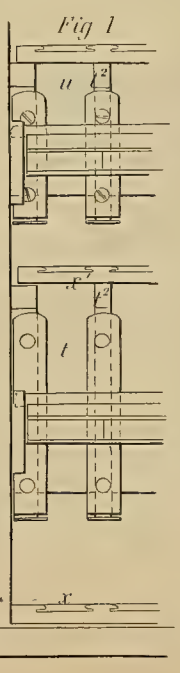
Fig 1



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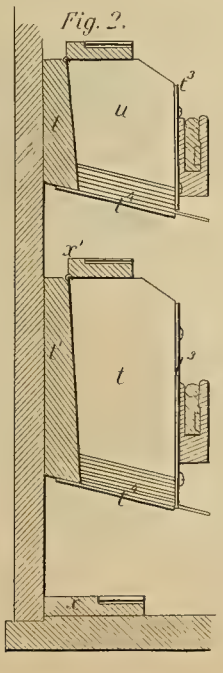

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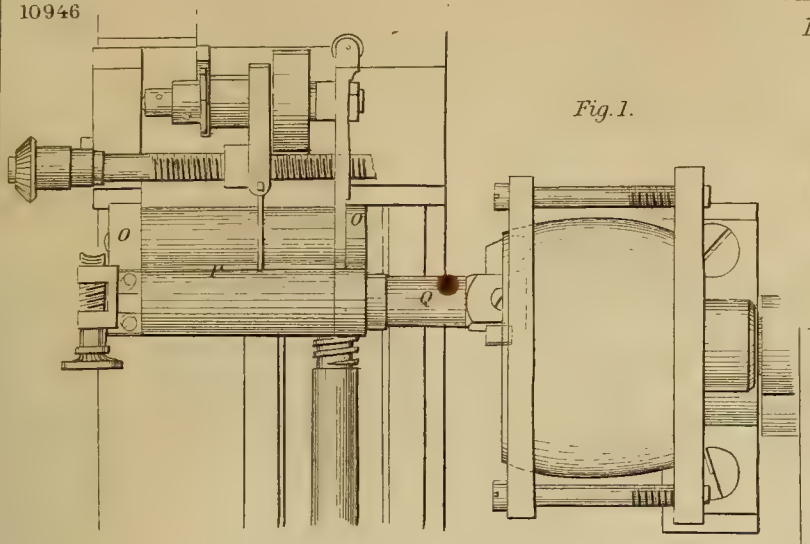

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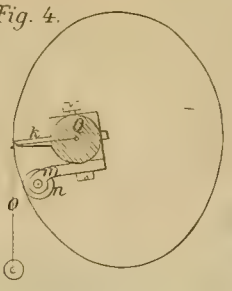

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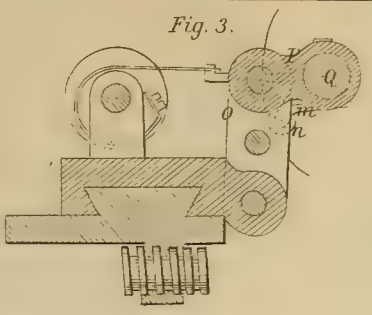

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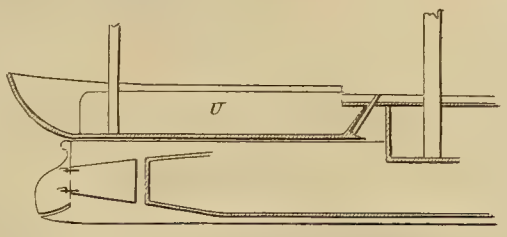

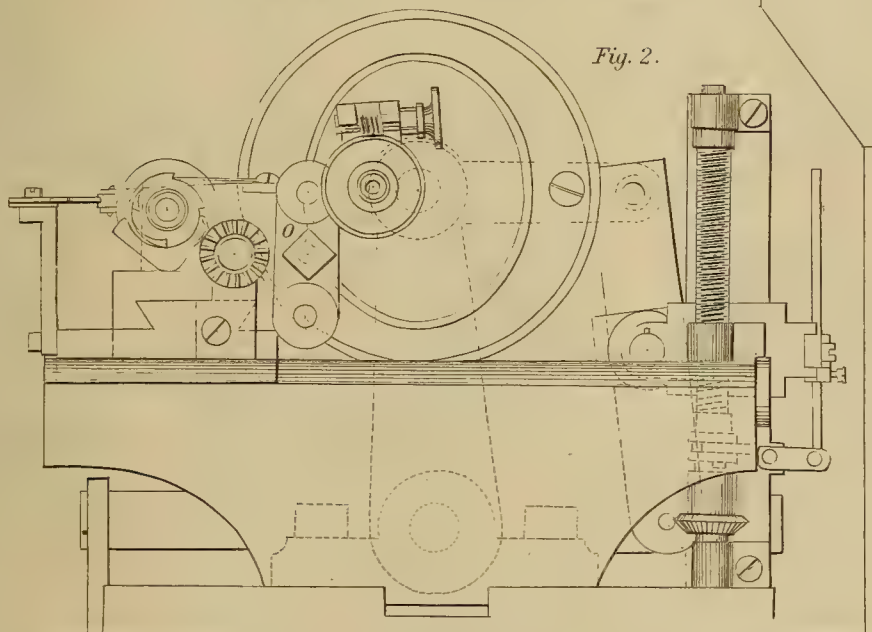

Fig. 2.

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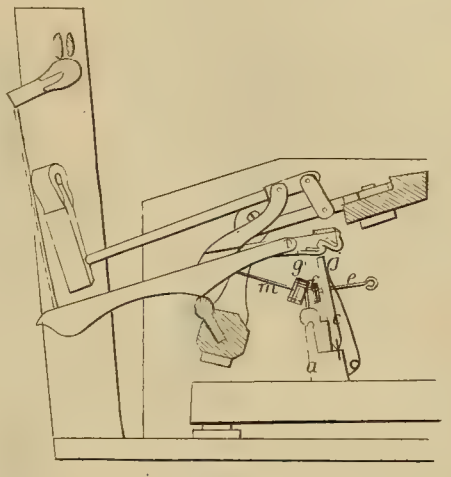

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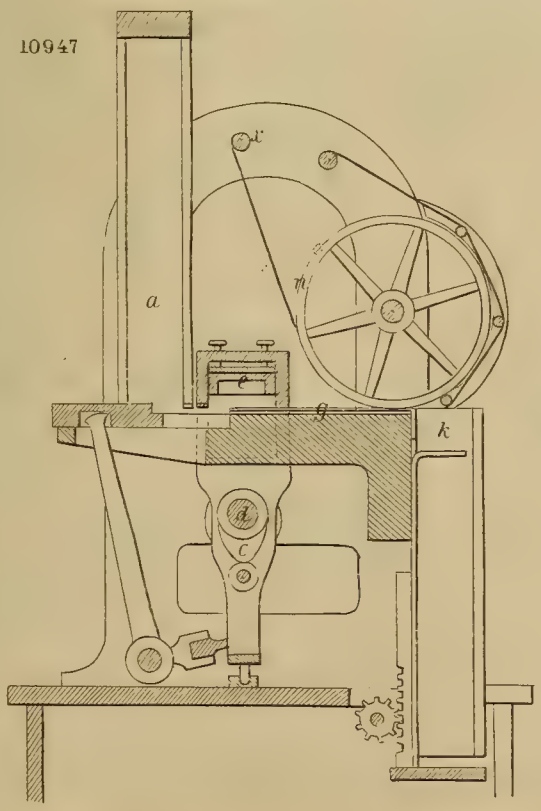

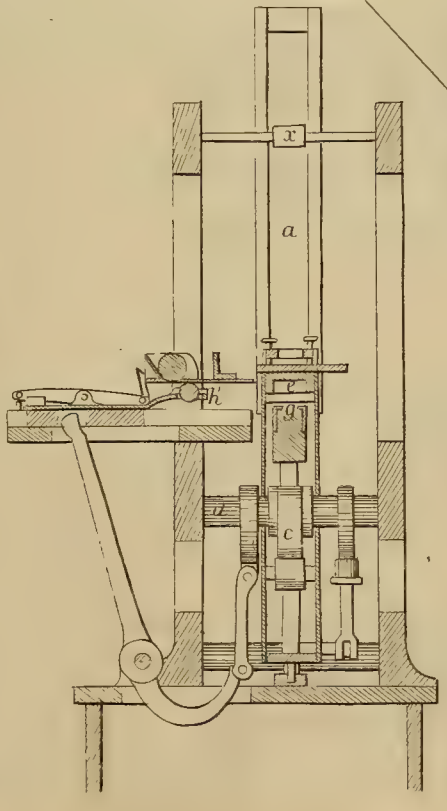

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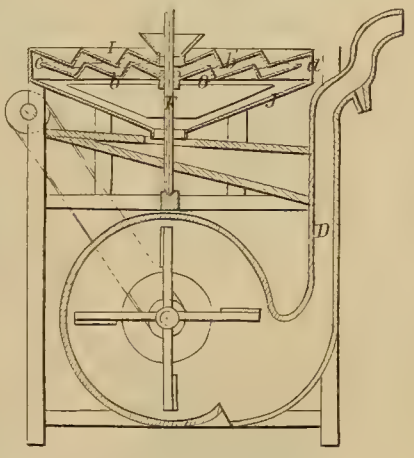

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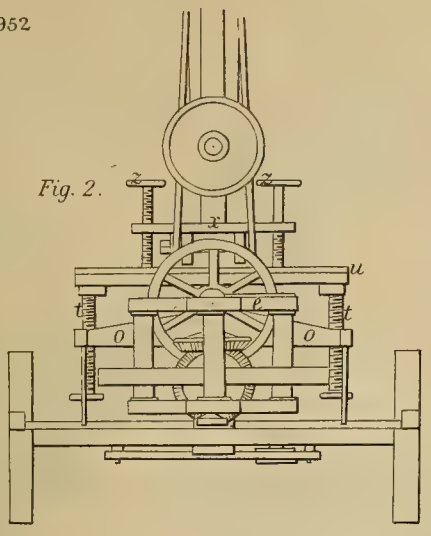

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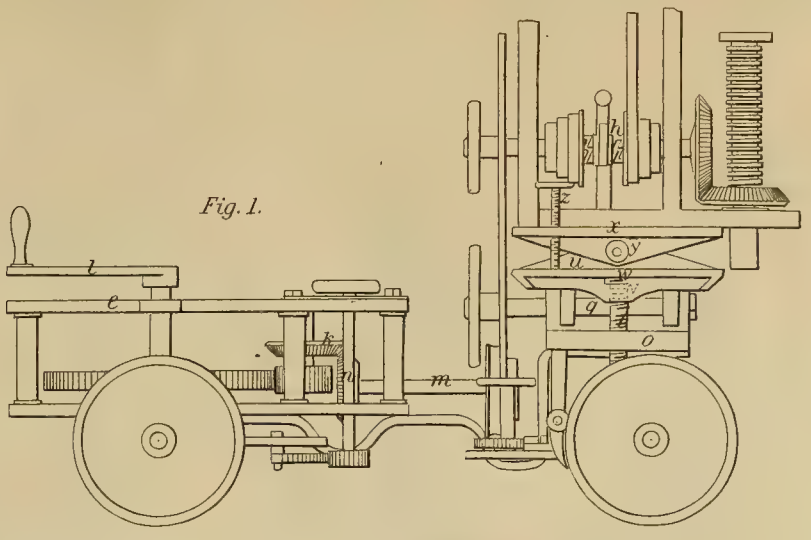

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Fig. 3.

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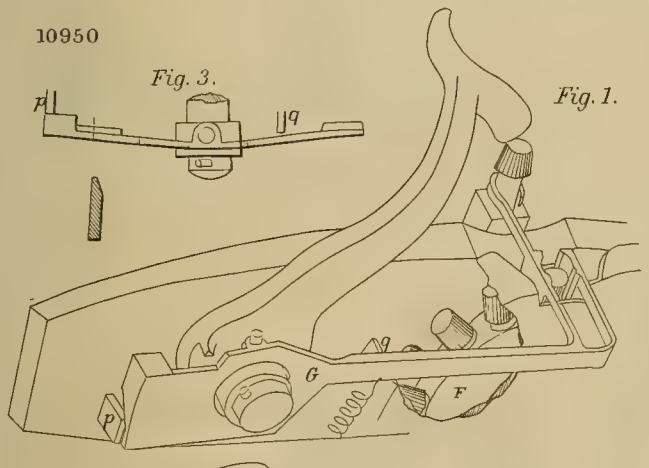

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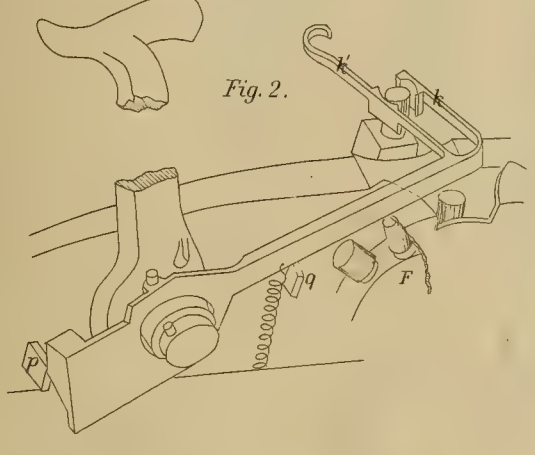

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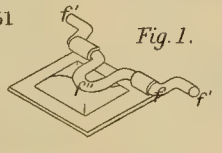

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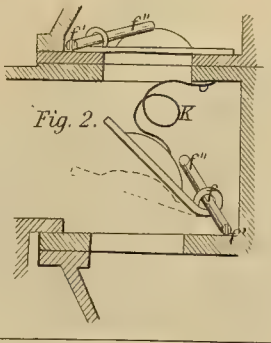

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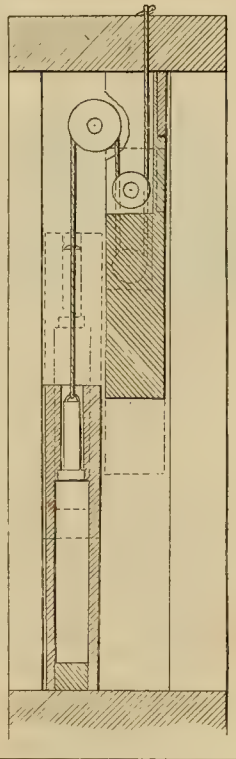

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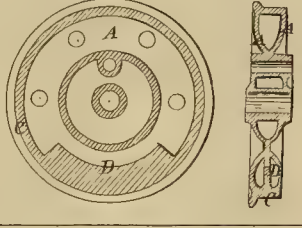

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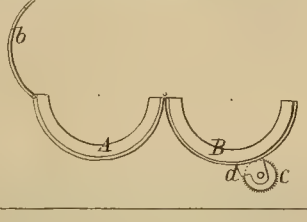

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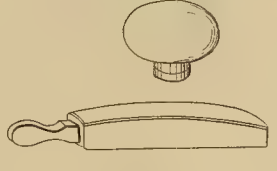

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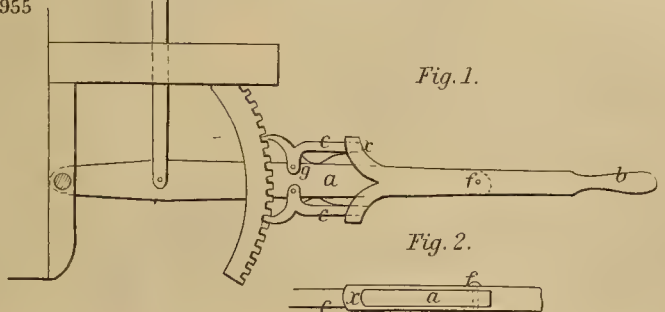

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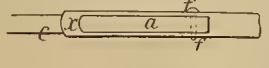

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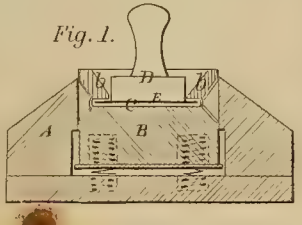

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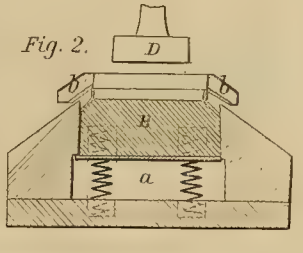

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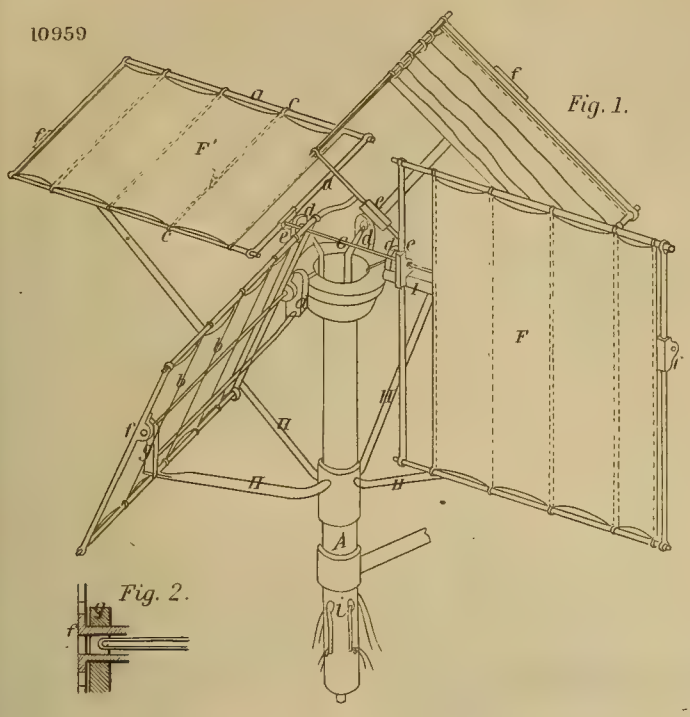

Fig. 1.

Fig. 2.

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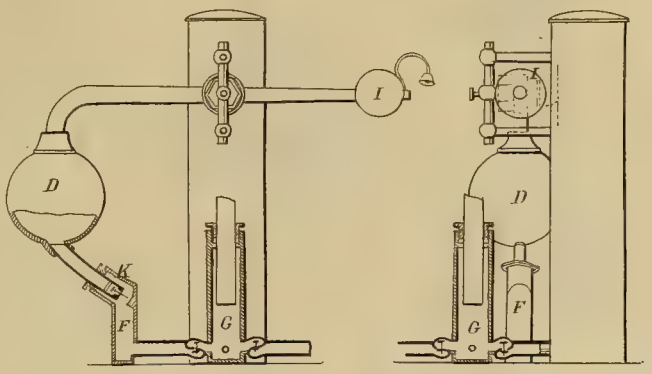

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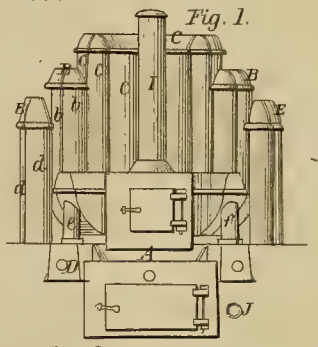

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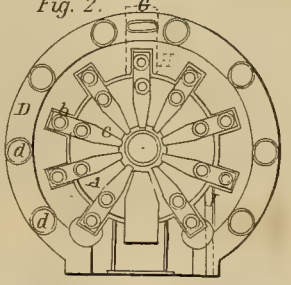

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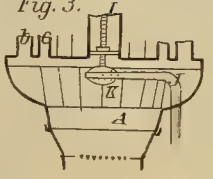

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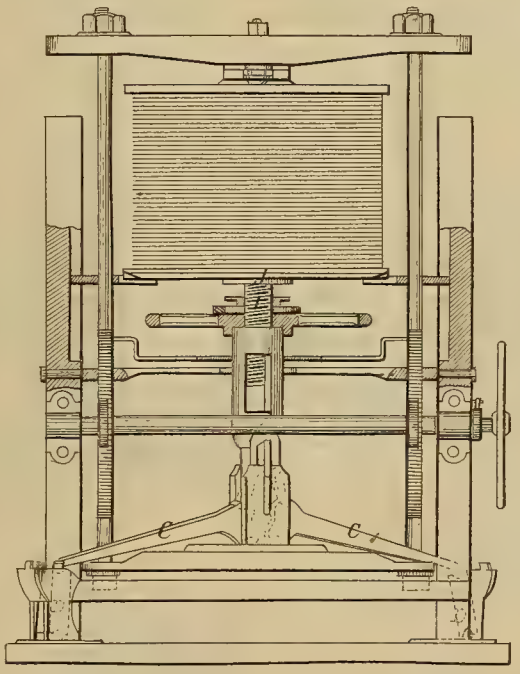

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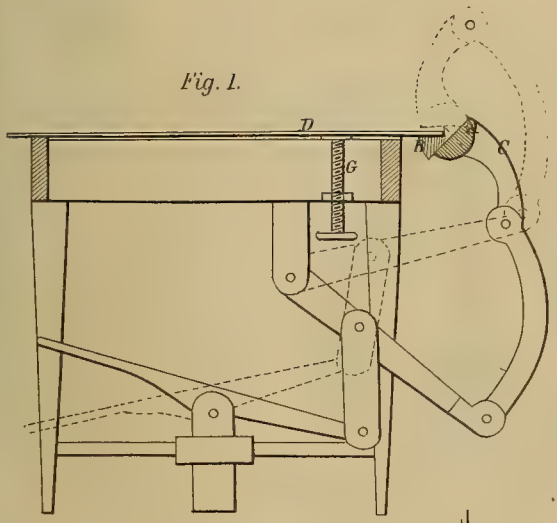
Fig. 1.



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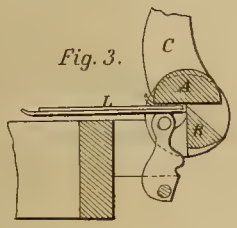

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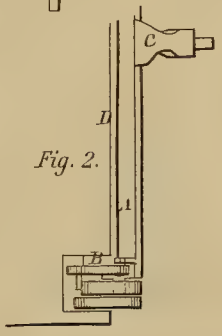

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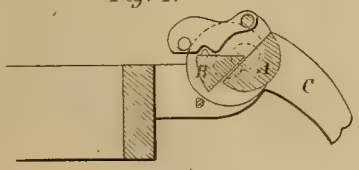

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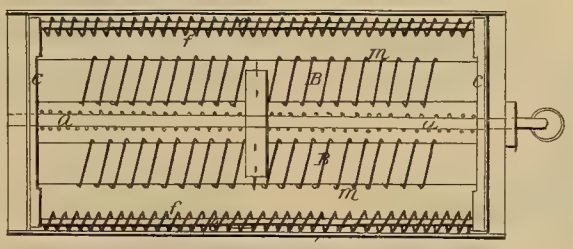

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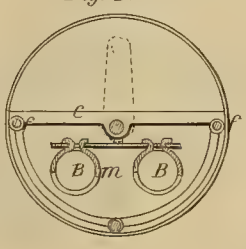

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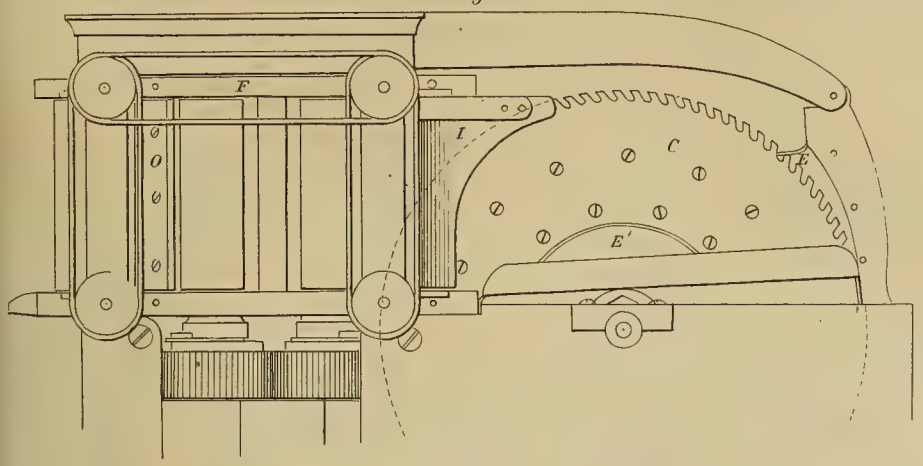

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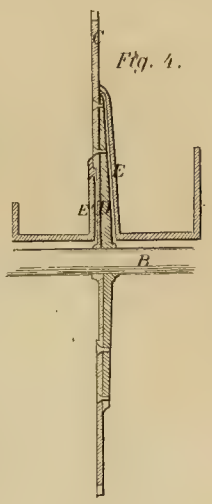

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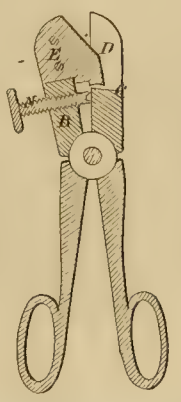

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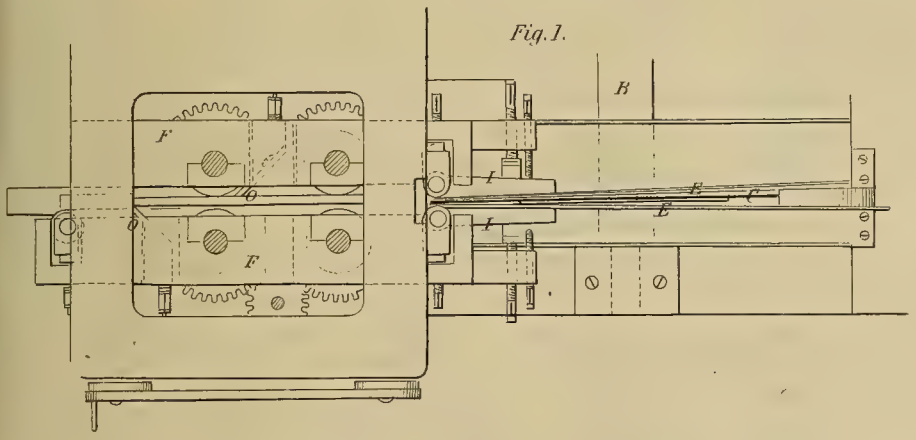

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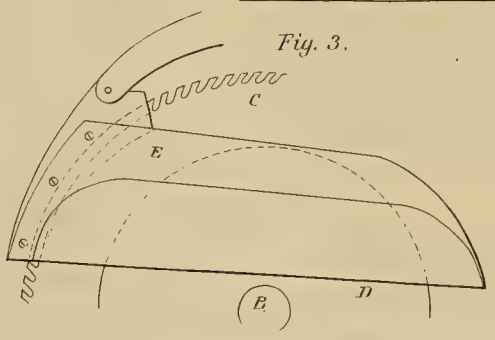

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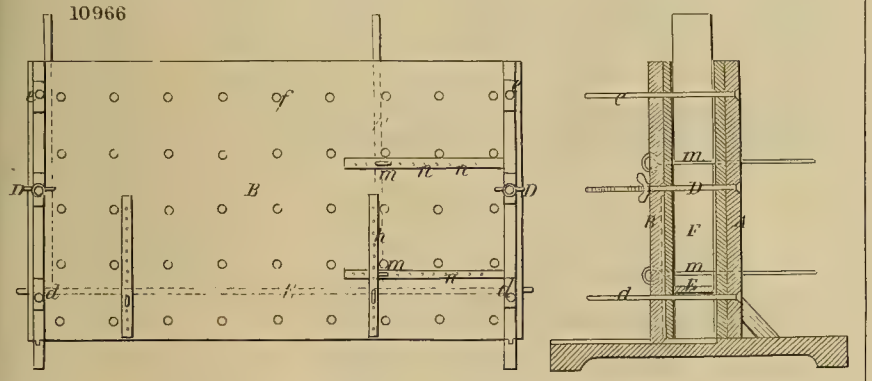

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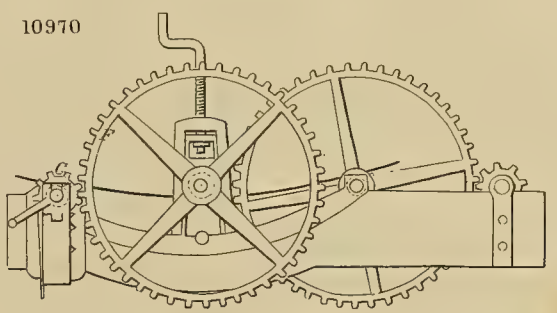

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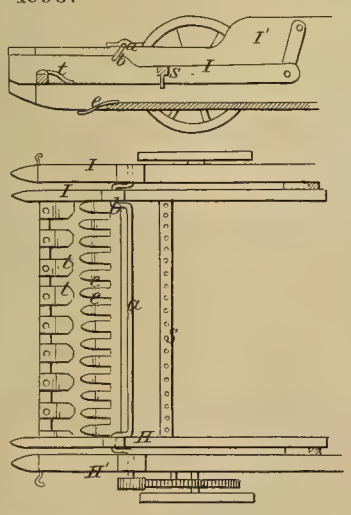

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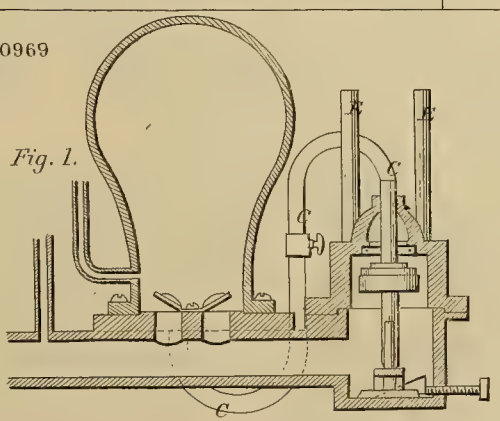

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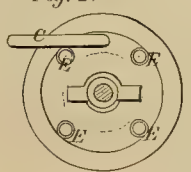

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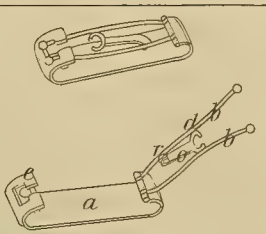

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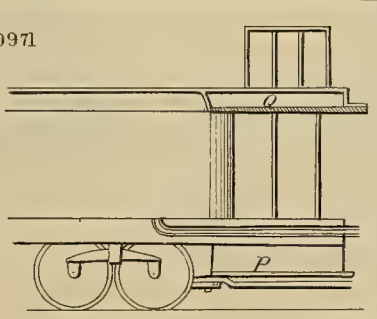

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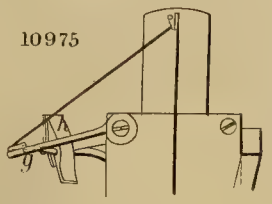

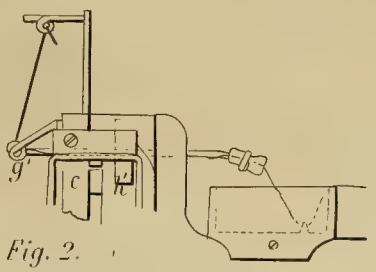

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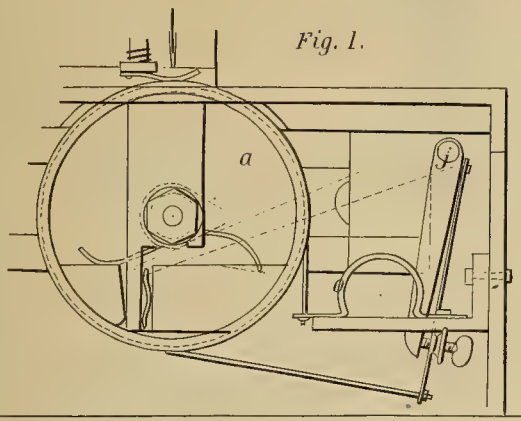

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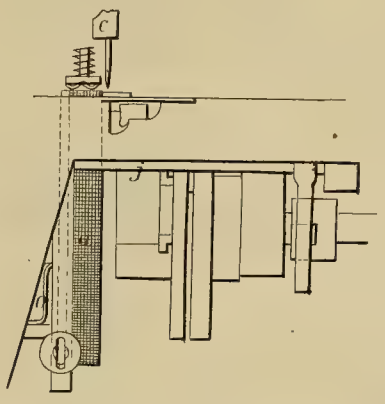

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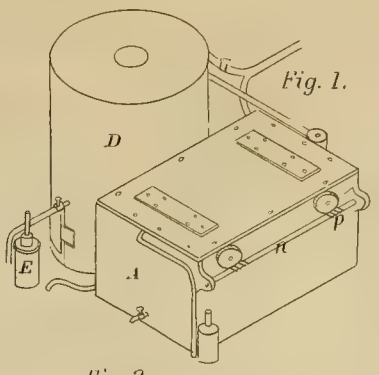

Fig. 1.

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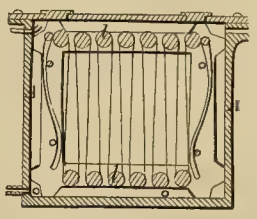

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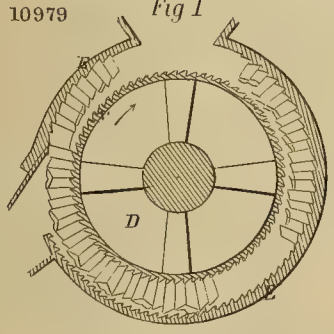

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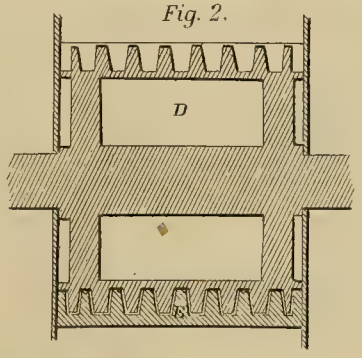

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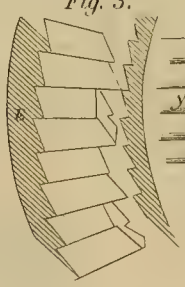

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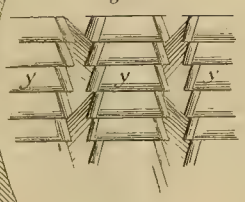

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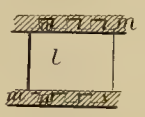

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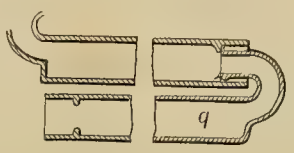

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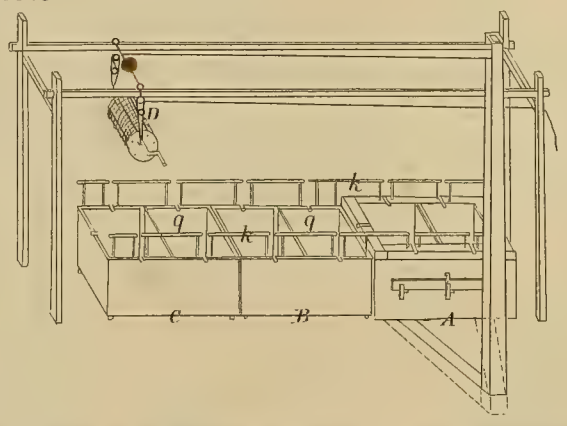

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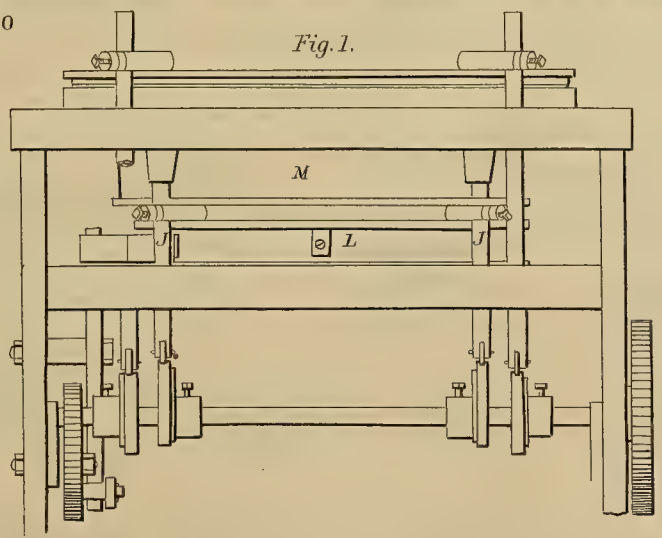

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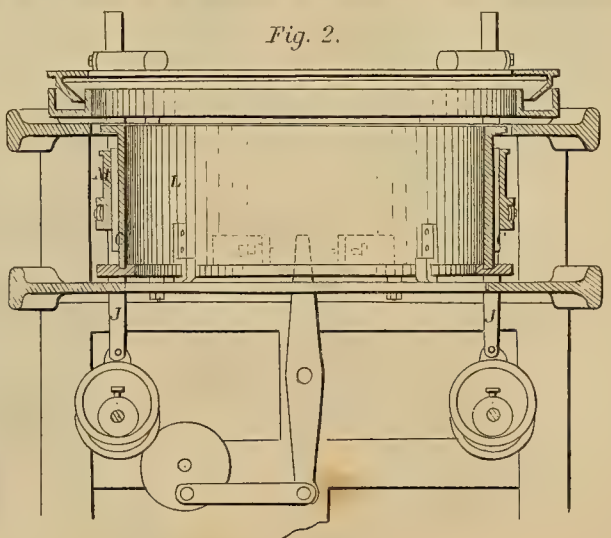

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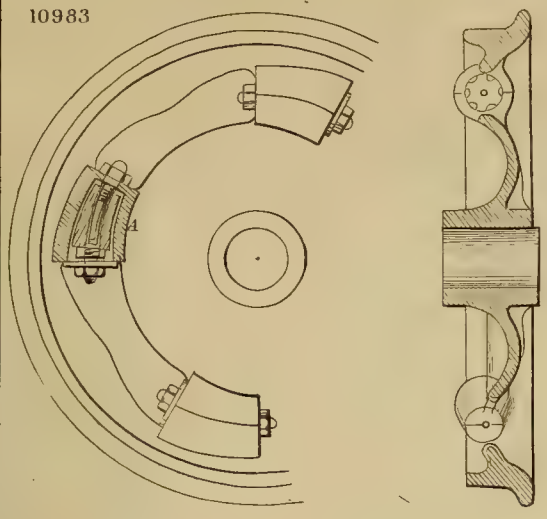

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Fig. 1.

Fig. 2.

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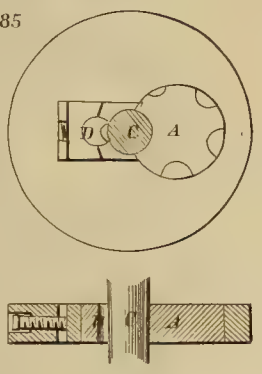

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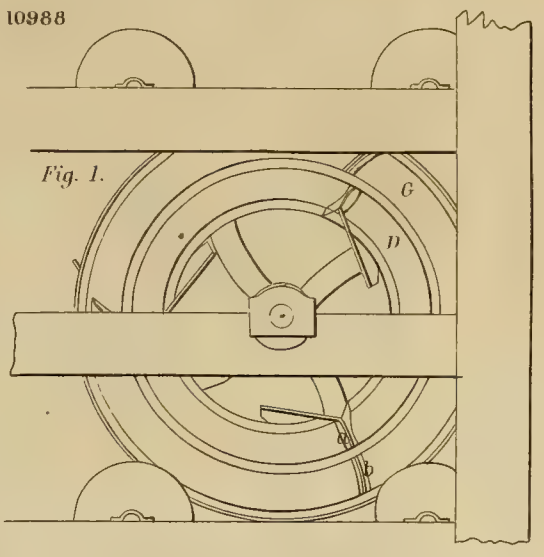

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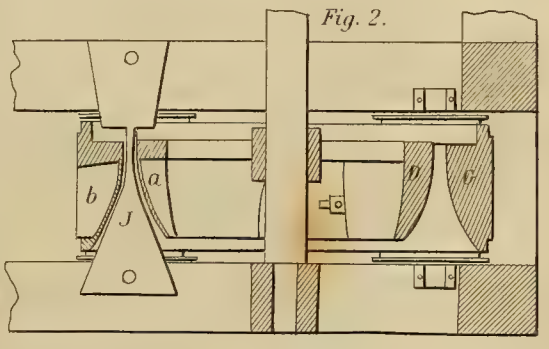

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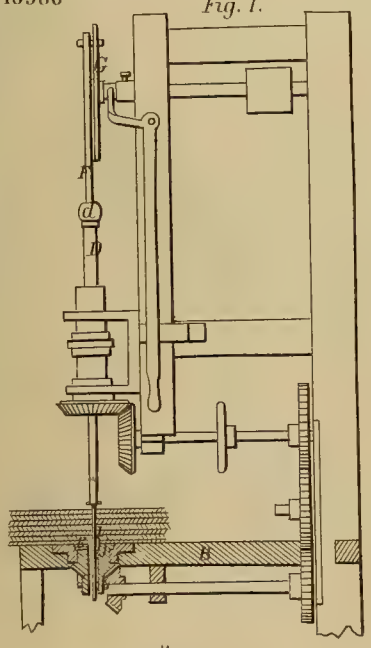

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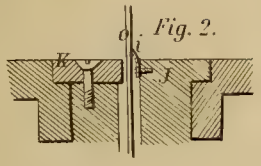

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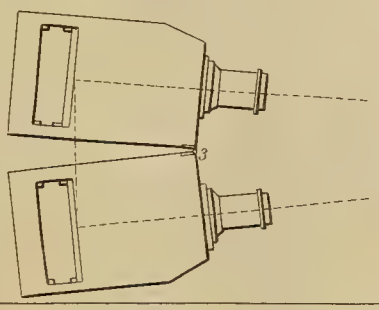

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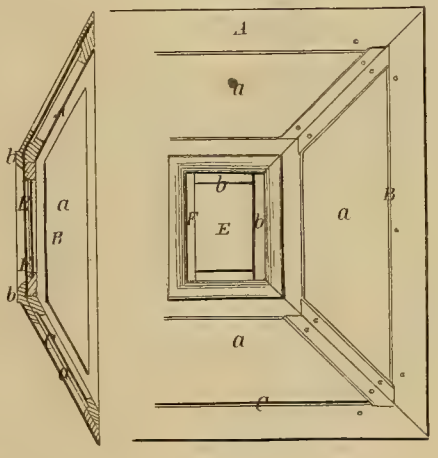

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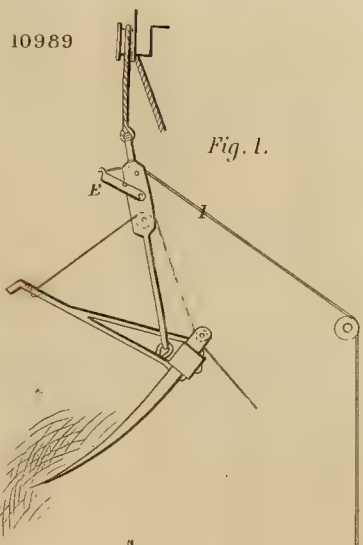

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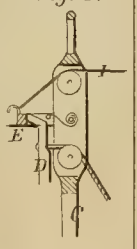

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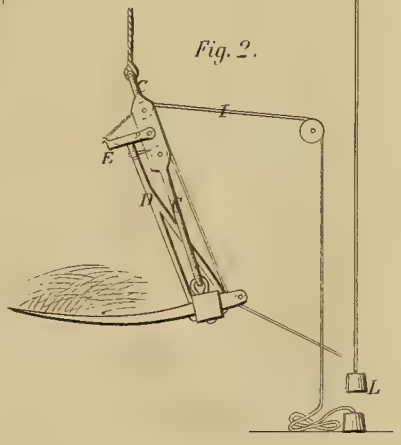

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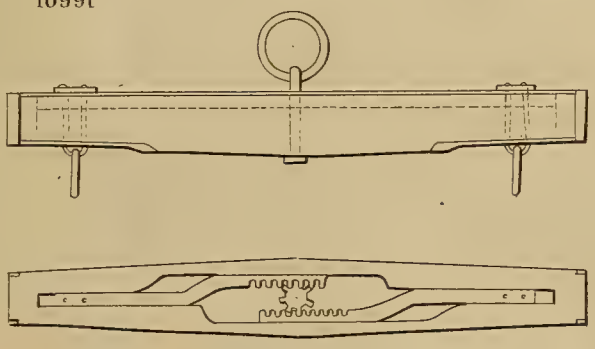

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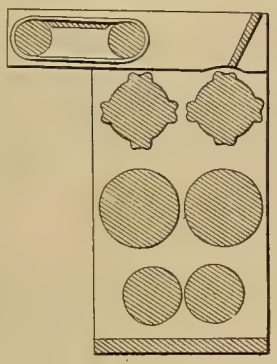

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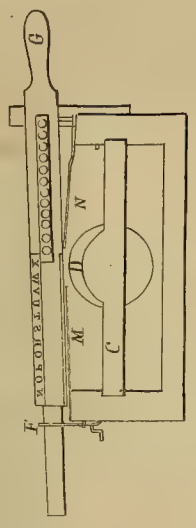

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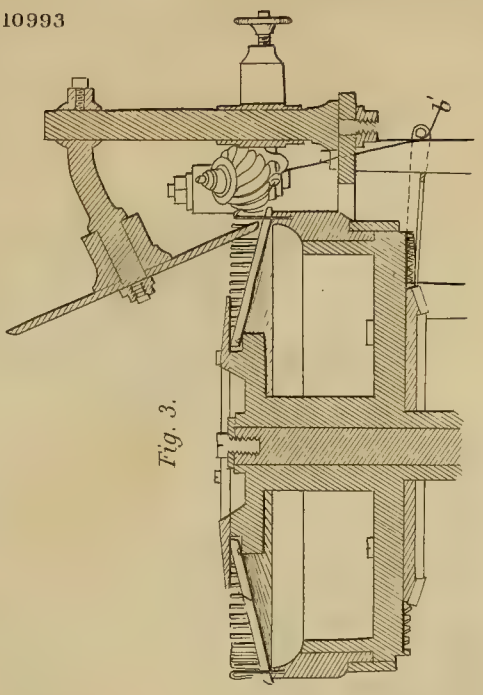

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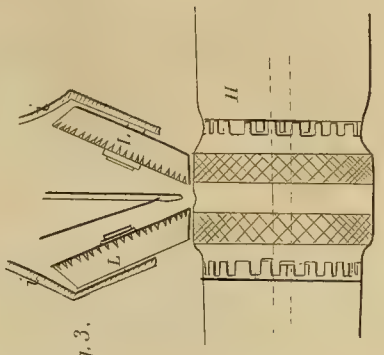

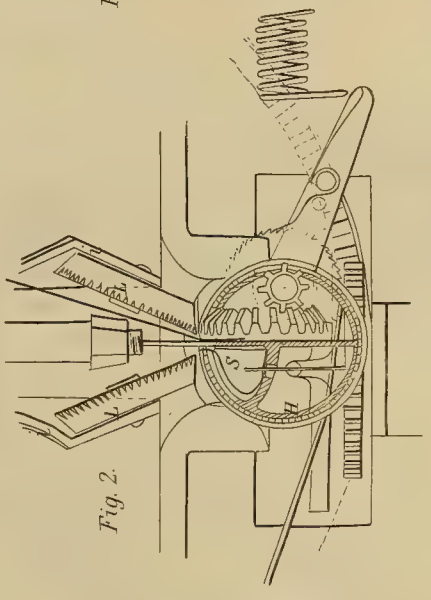

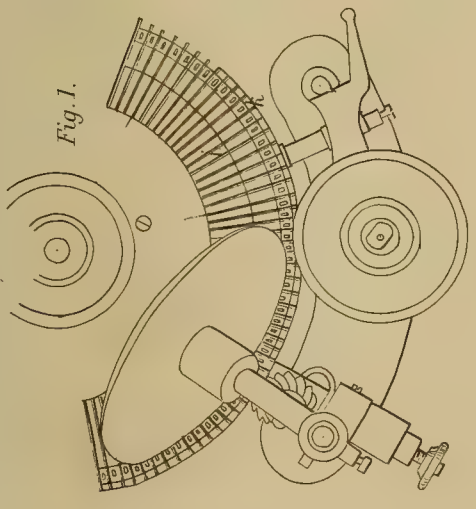

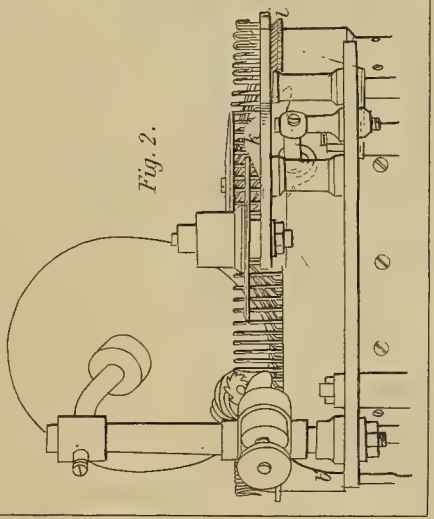

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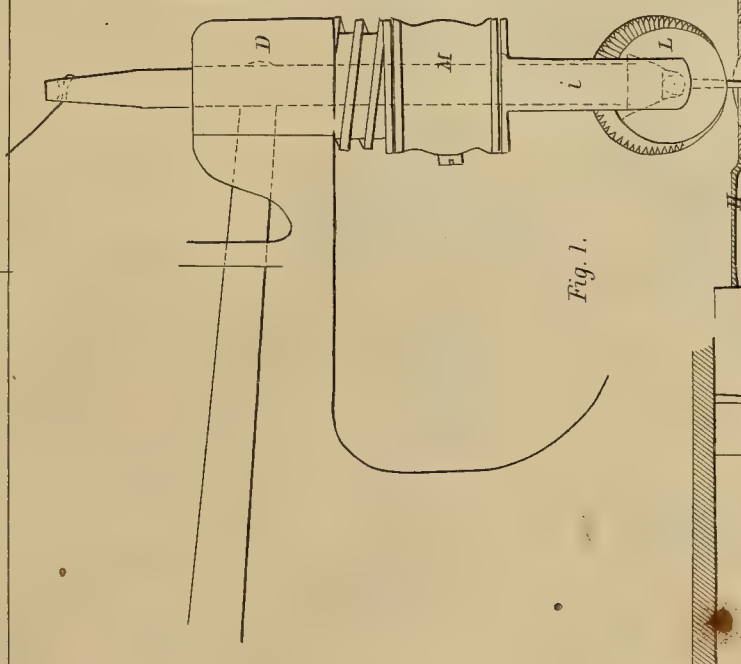

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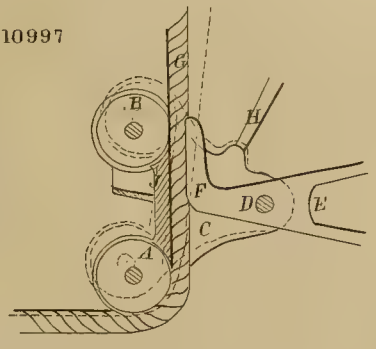

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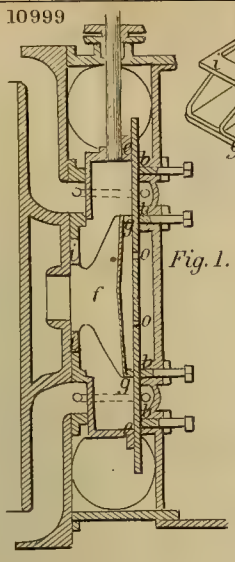

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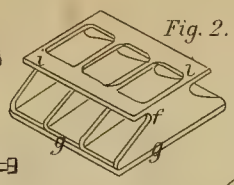

Fig. 2.

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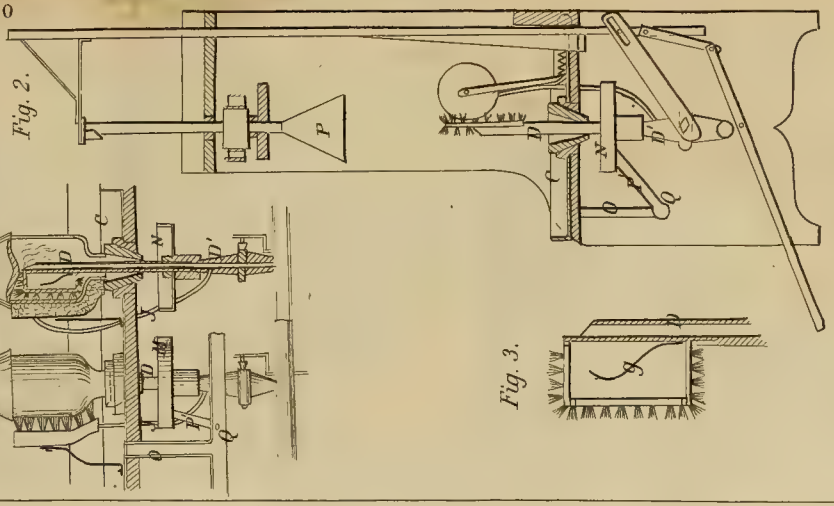

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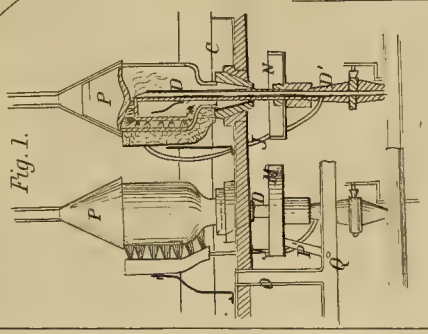

Fig. 1.

Fig. 3.

10998

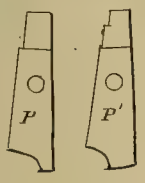

Fig. 5

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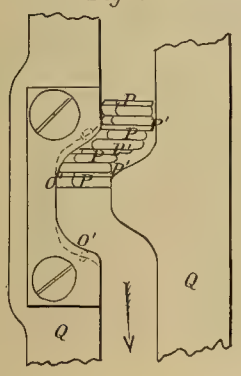

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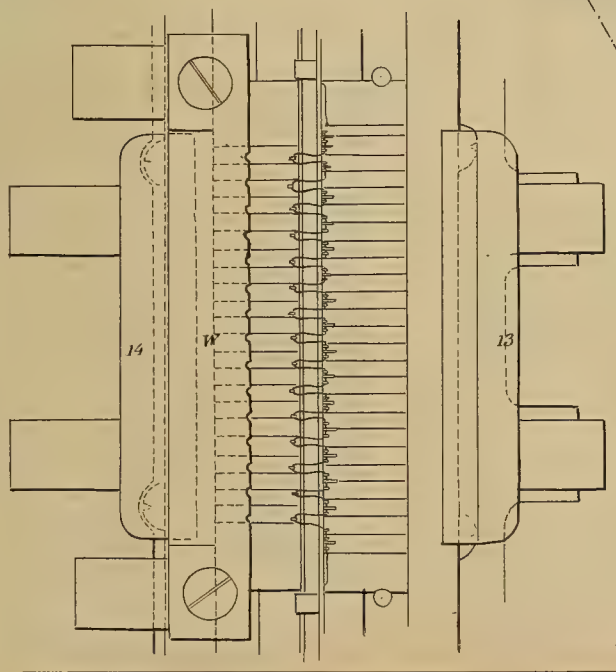

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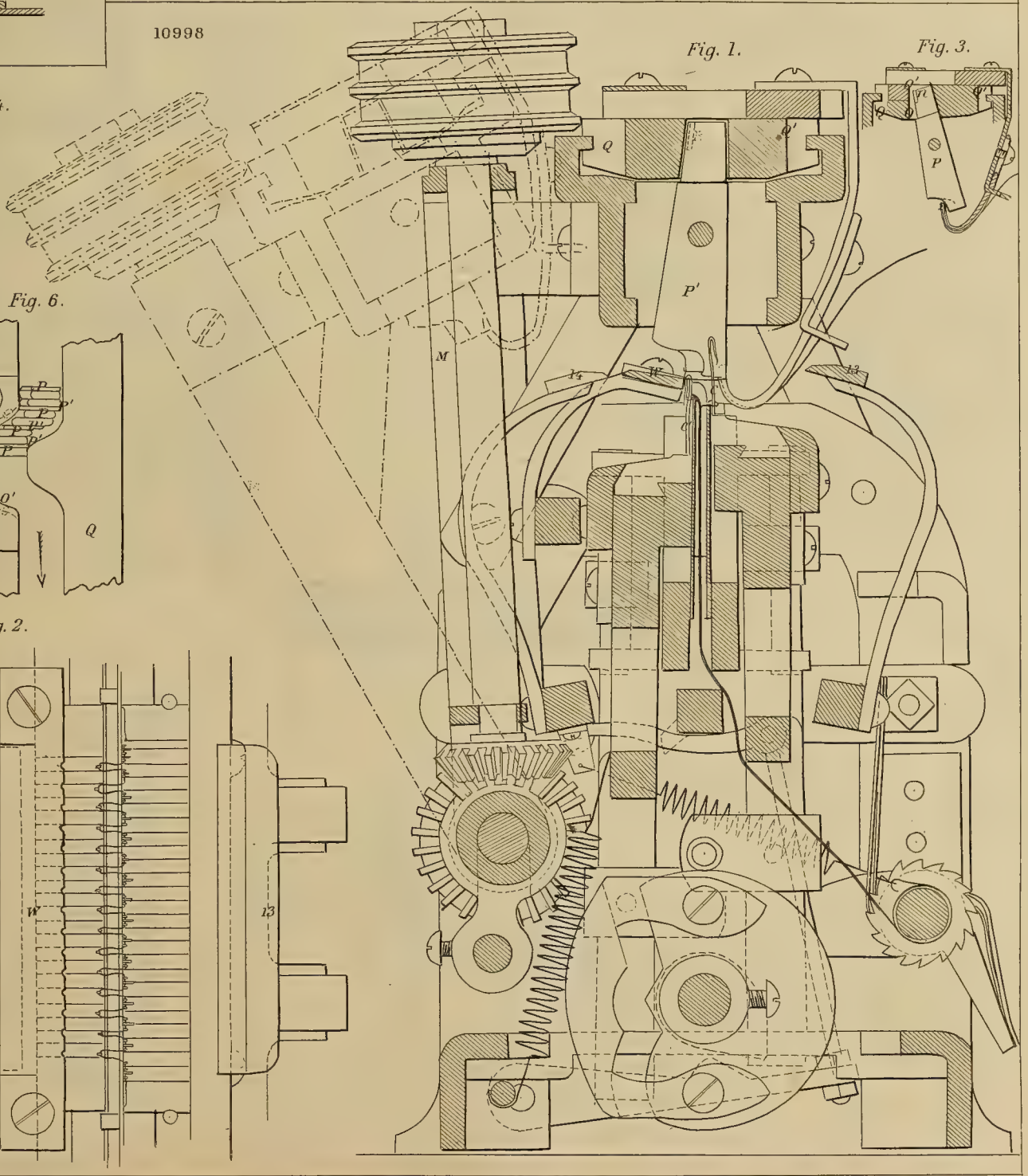
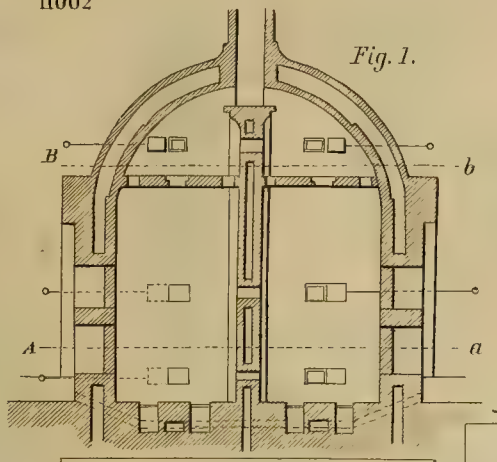


Fig. 1.

Fig. 3.

11002

Fig. 1.



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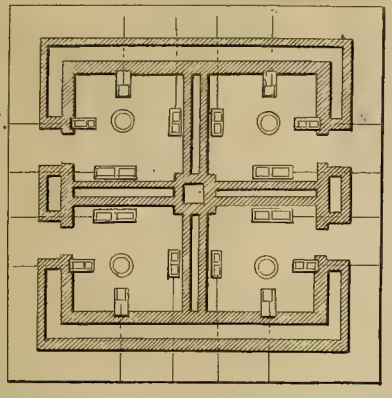

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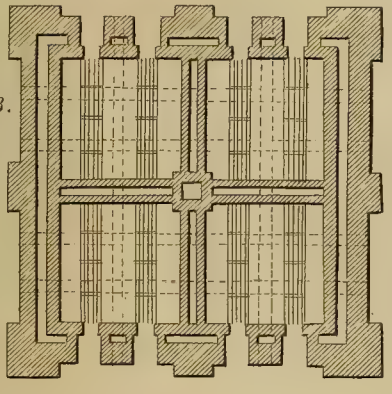

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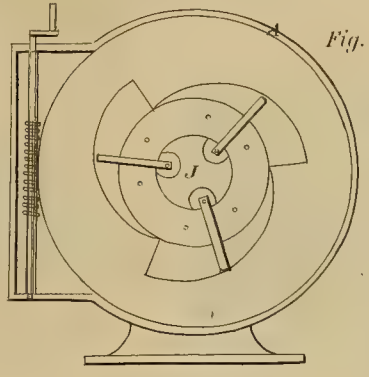

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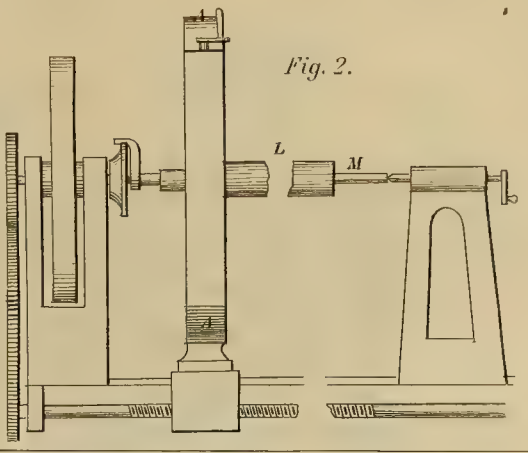

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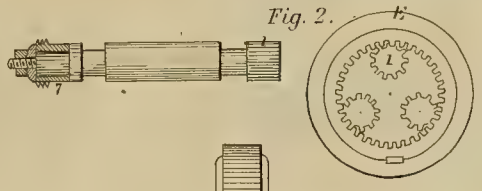

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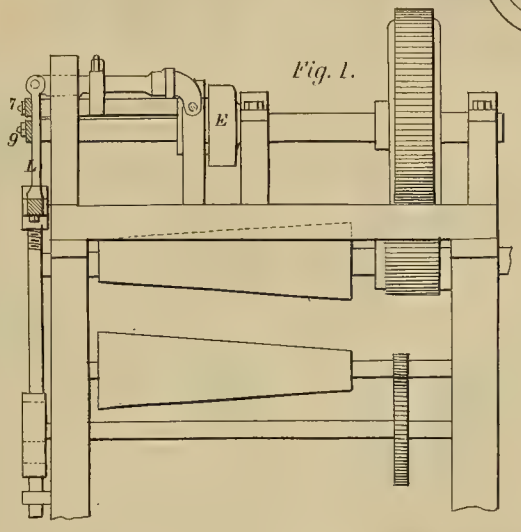

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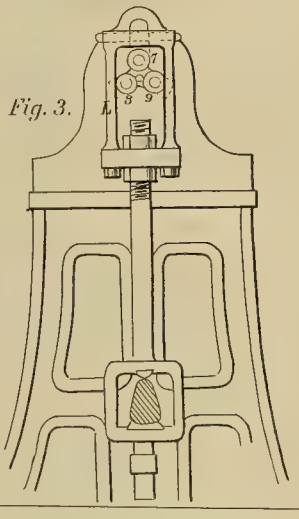

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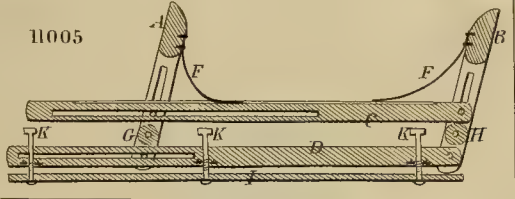

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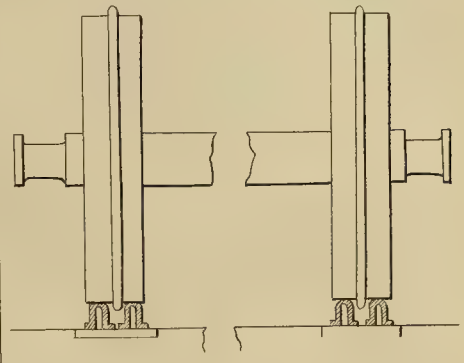

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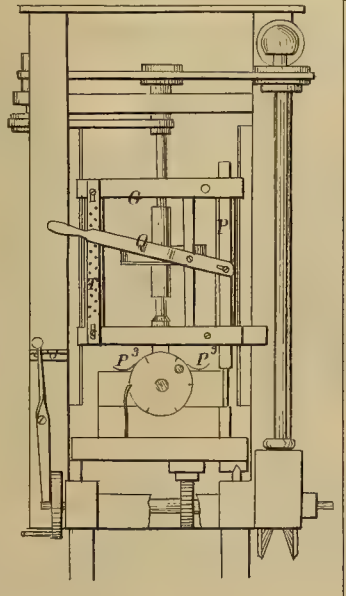

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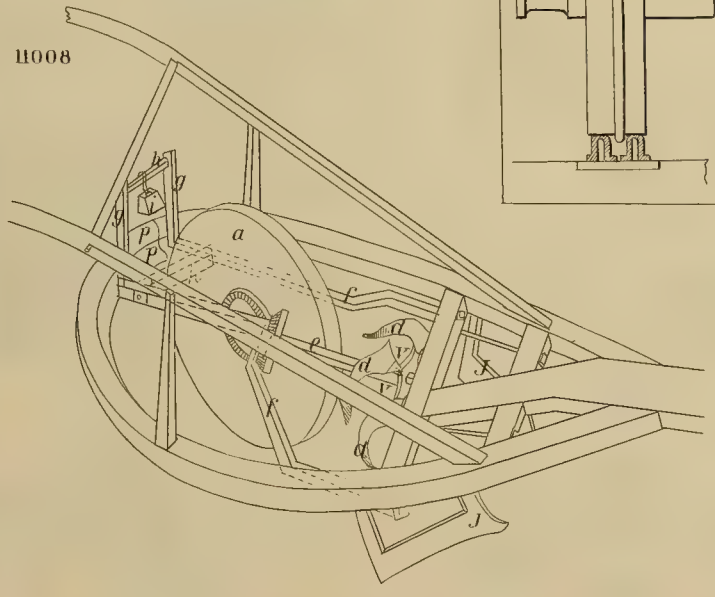

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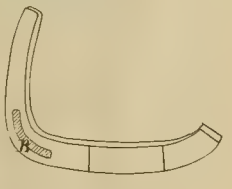

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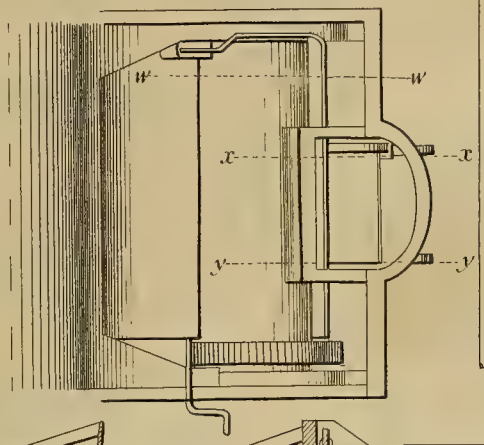

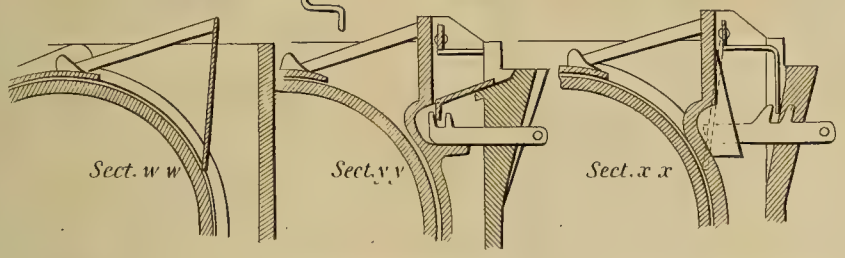

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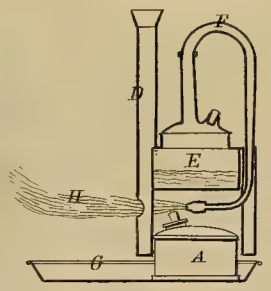

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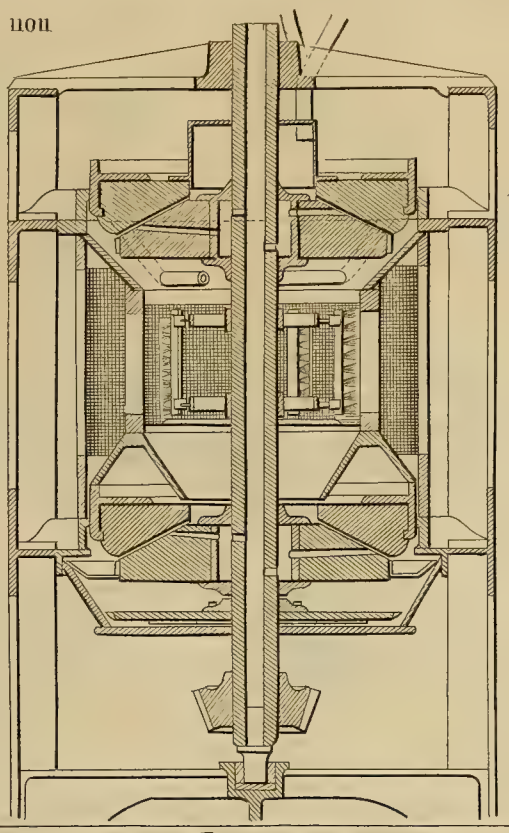

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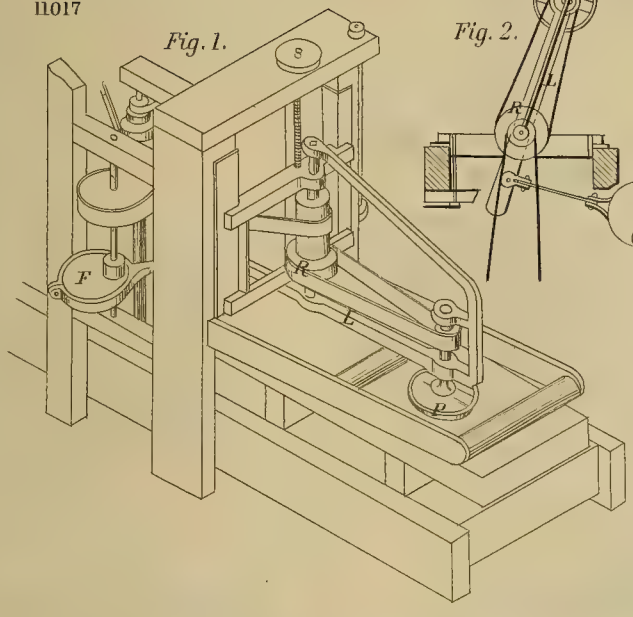

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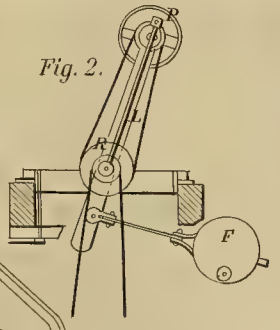

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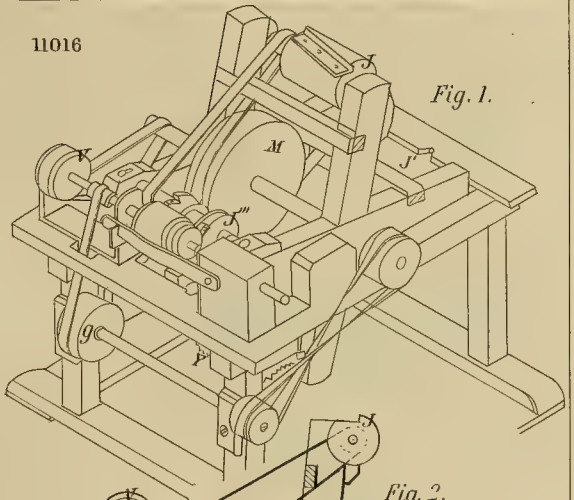
Fig. 2

Fig. 3.

Fig. 1.

11016

Fig. 1.



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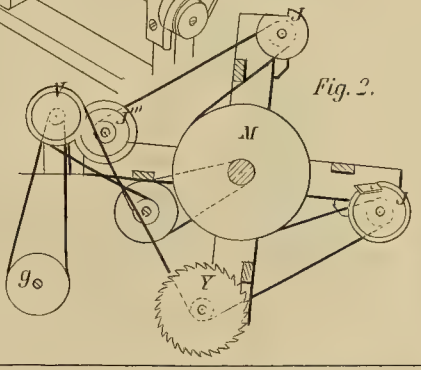

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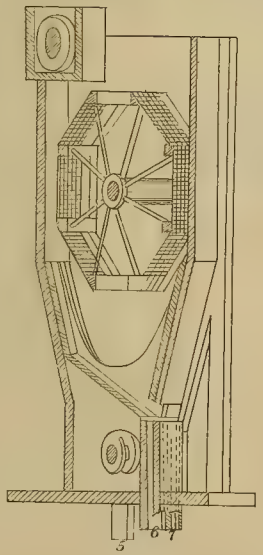

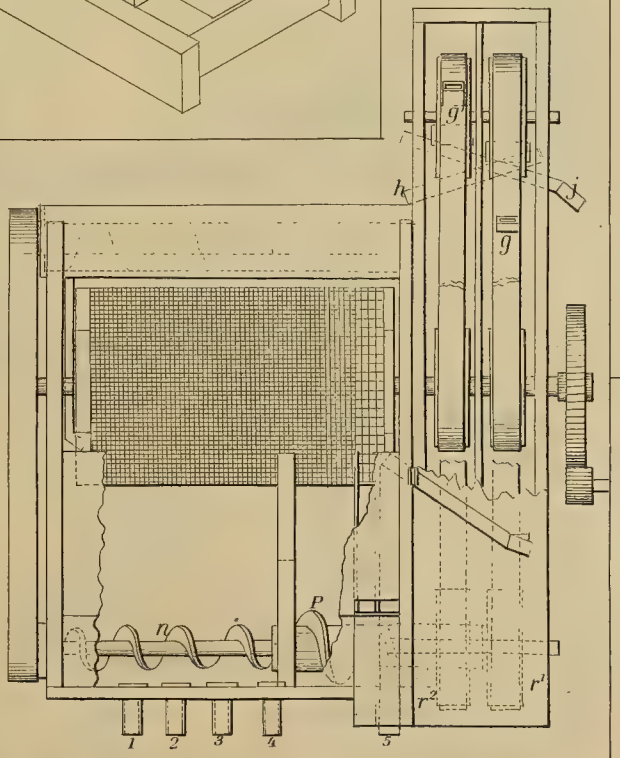

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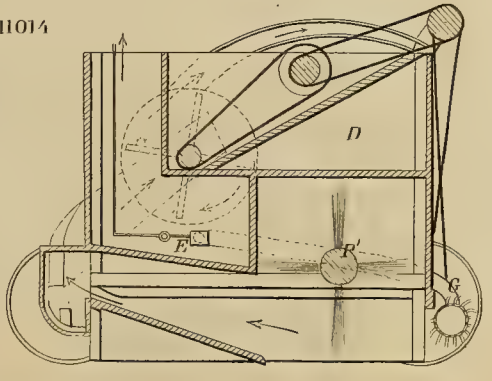

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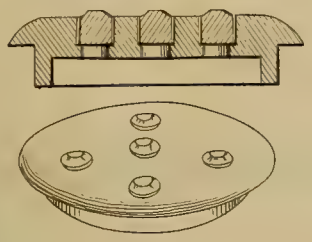

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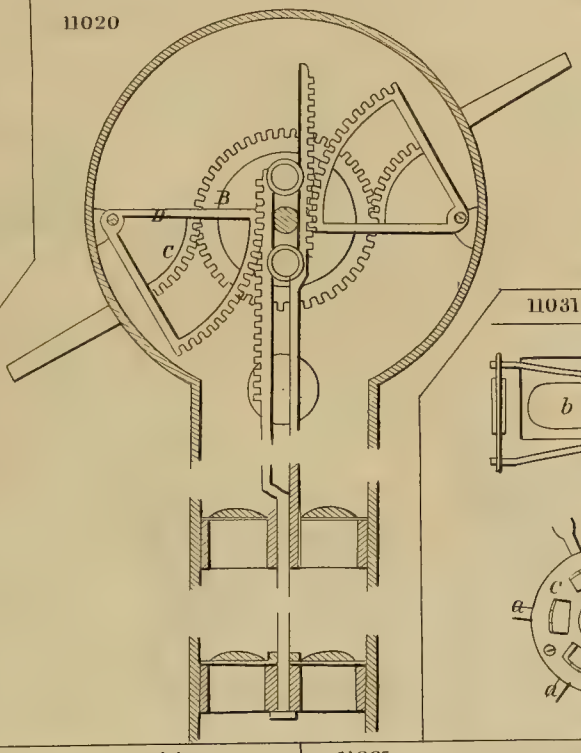

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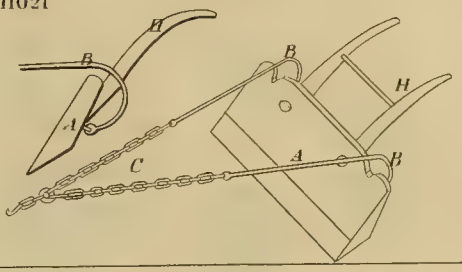

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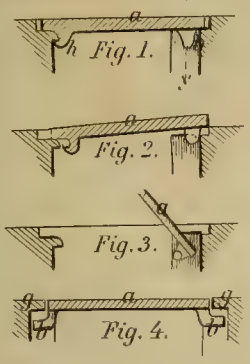

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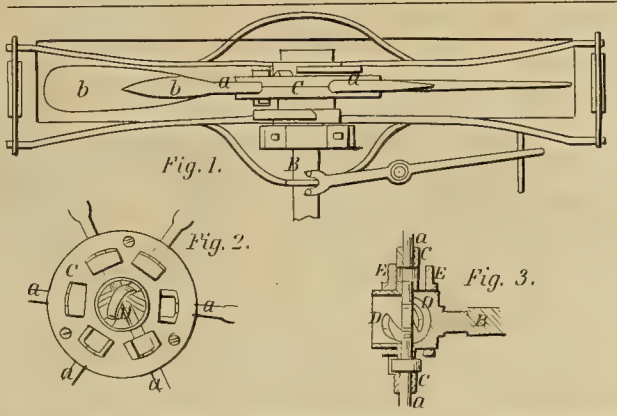

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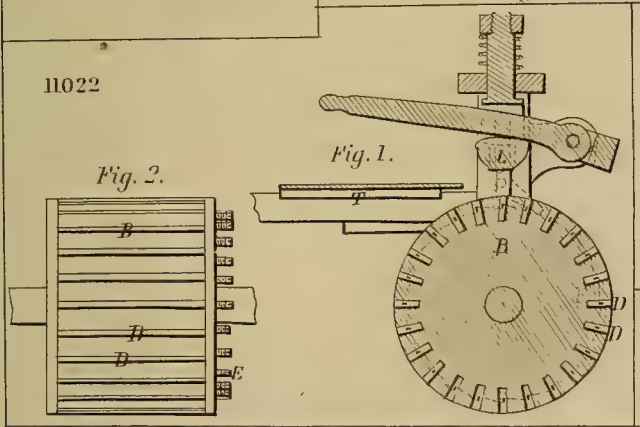

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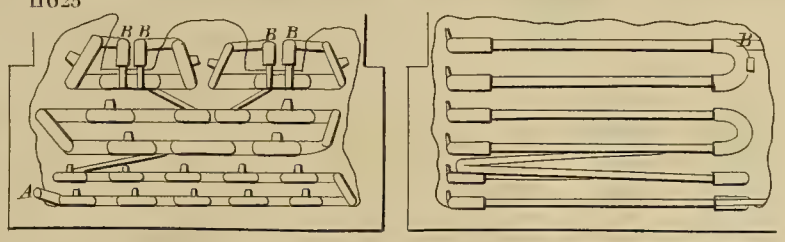

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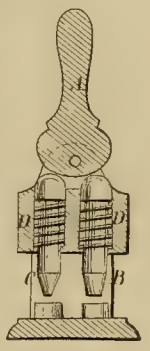

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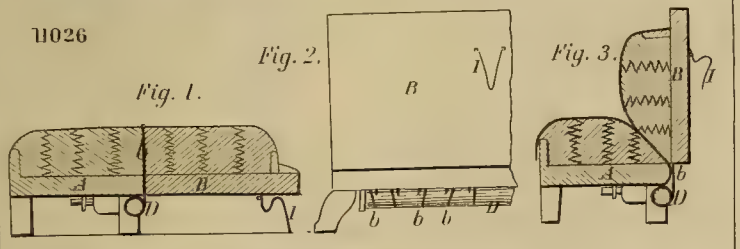

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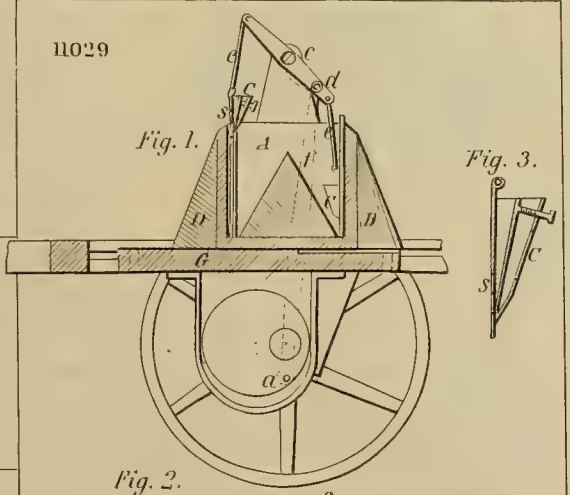

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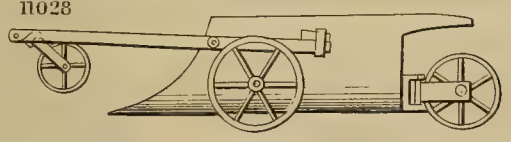

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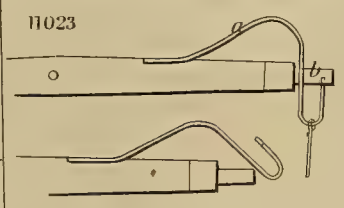

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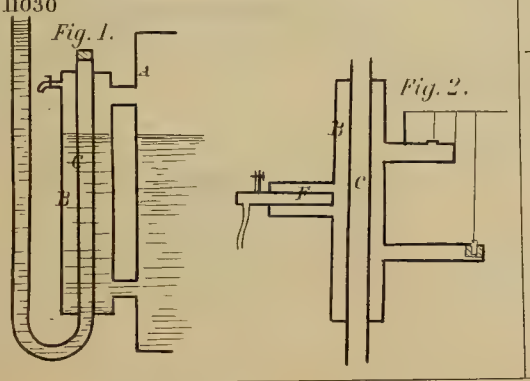

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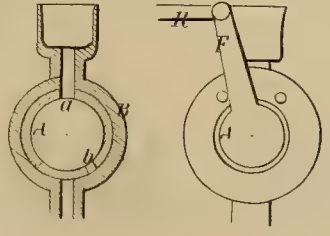

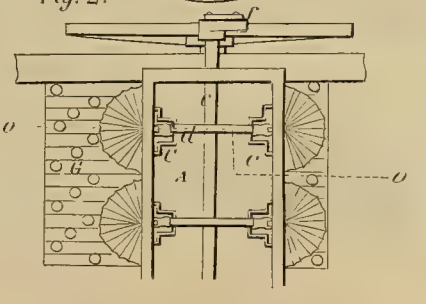

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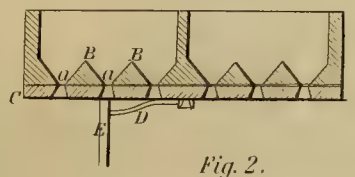

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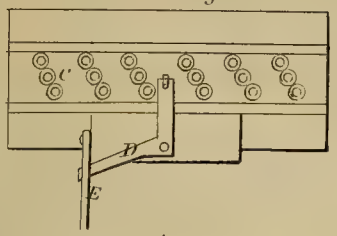

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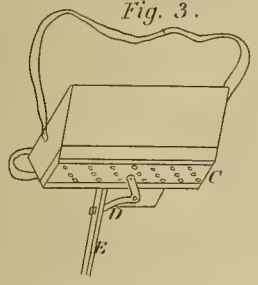

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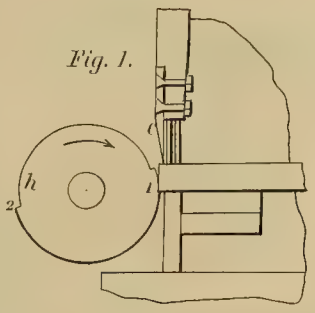

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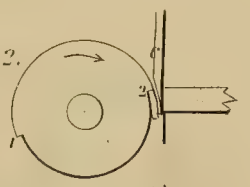

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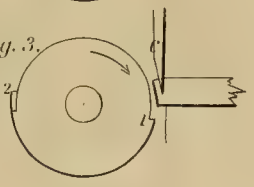

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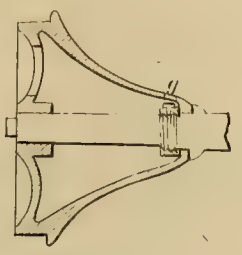

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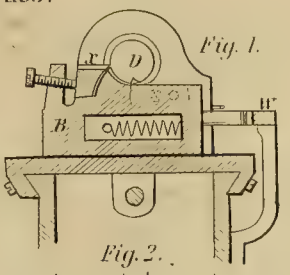

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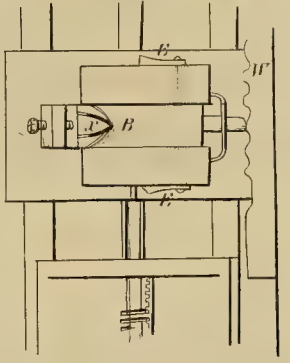

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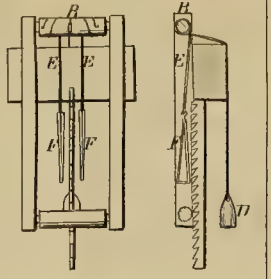

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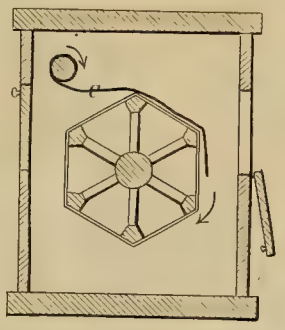

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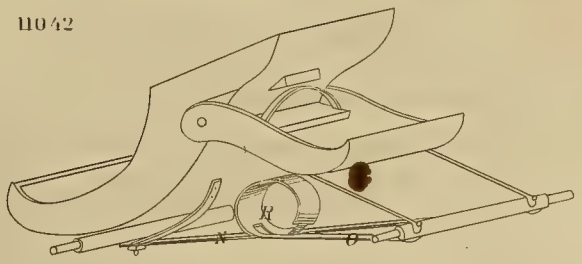

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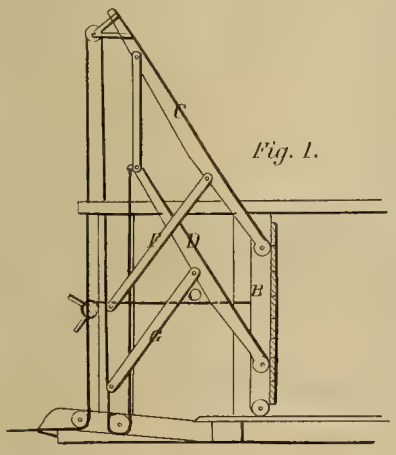

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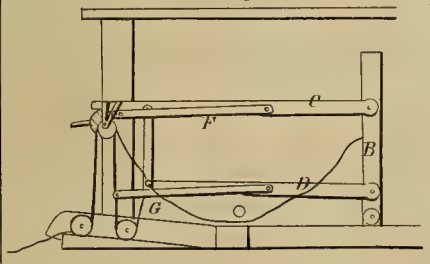

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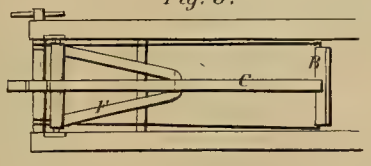

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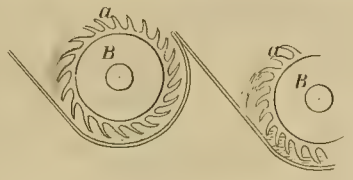

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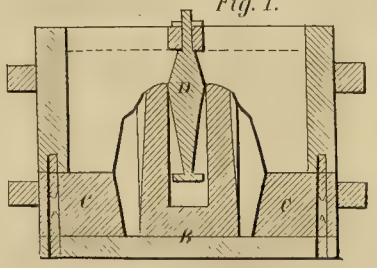

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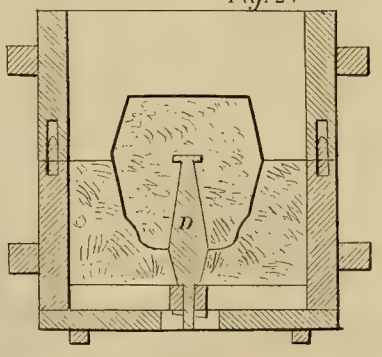

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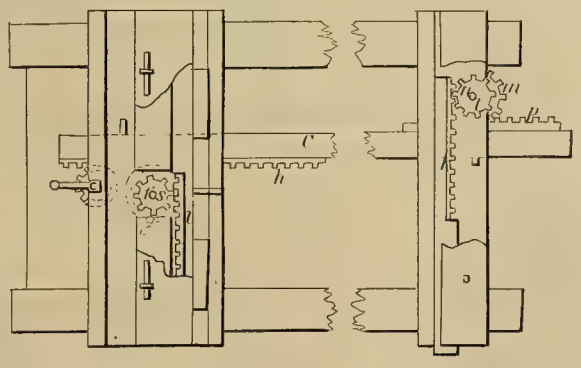

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Fig. 1.

Fig. 2.

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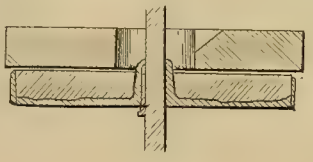

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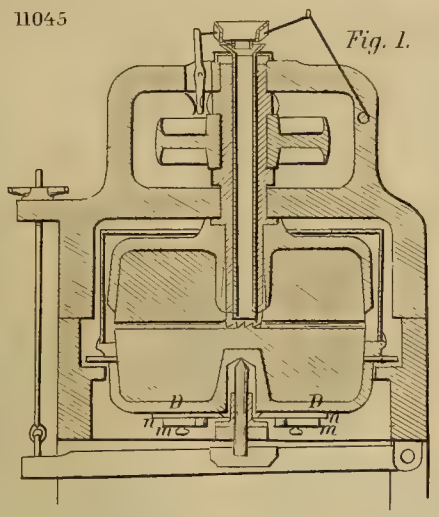

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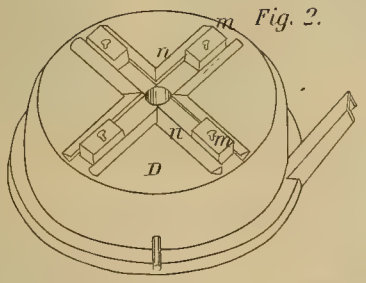

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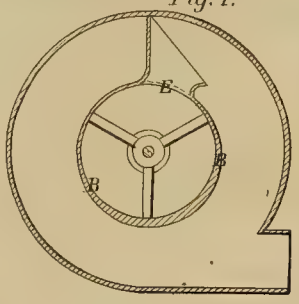

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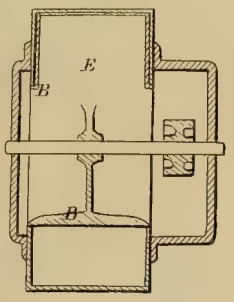

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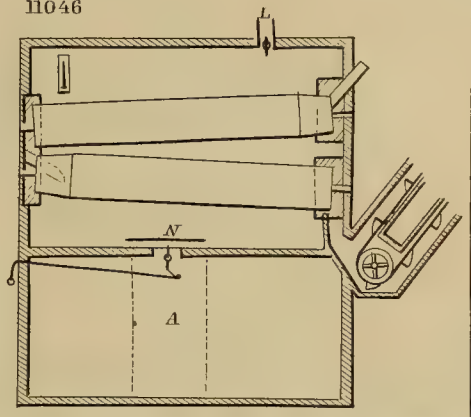

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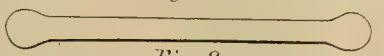

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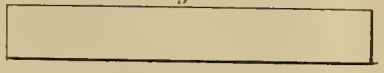

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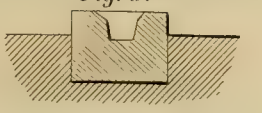

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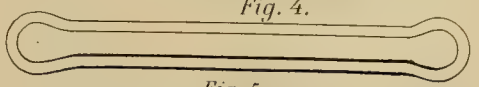

Fig 5

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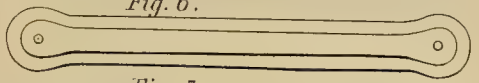

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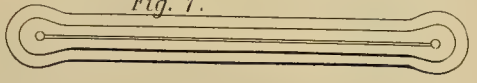

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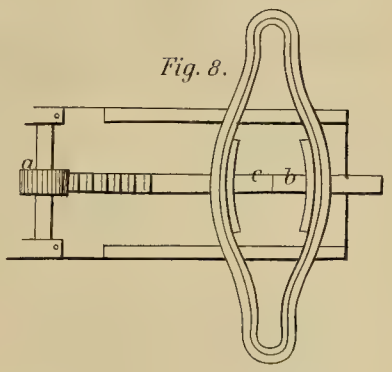

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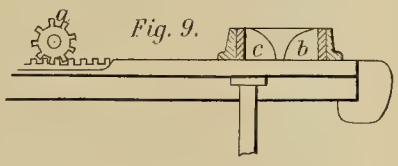

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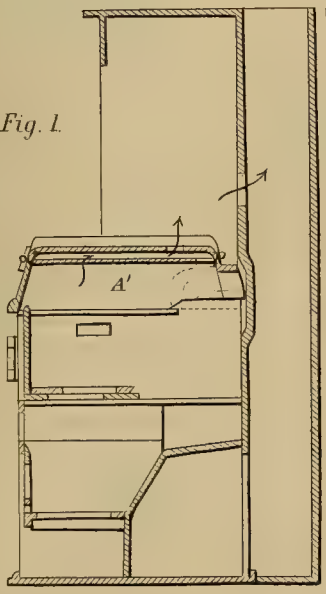

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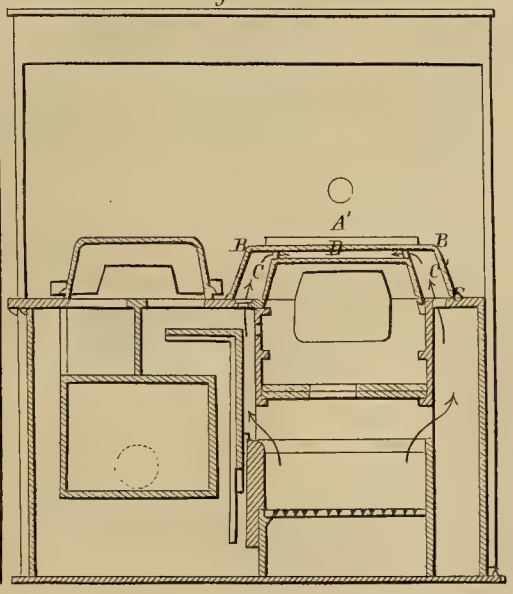

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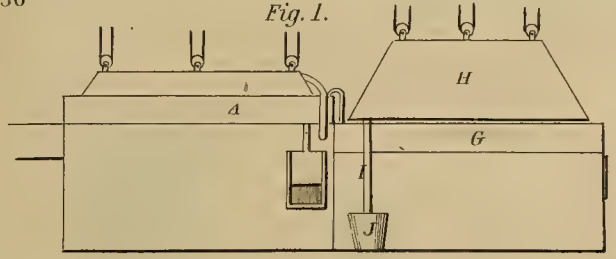

Fig. 2.

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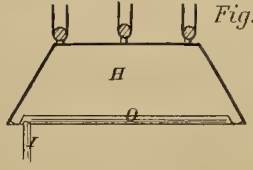

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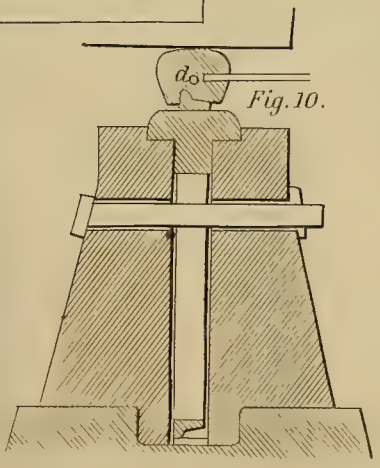

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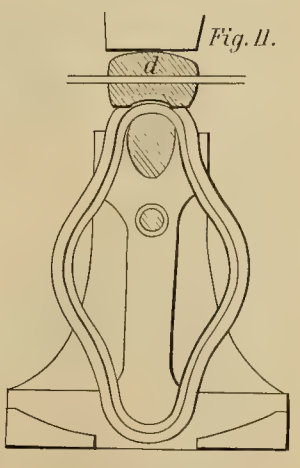

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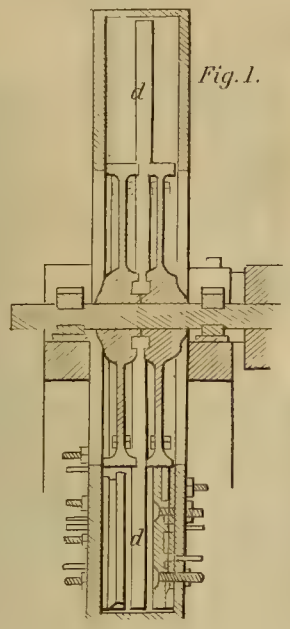

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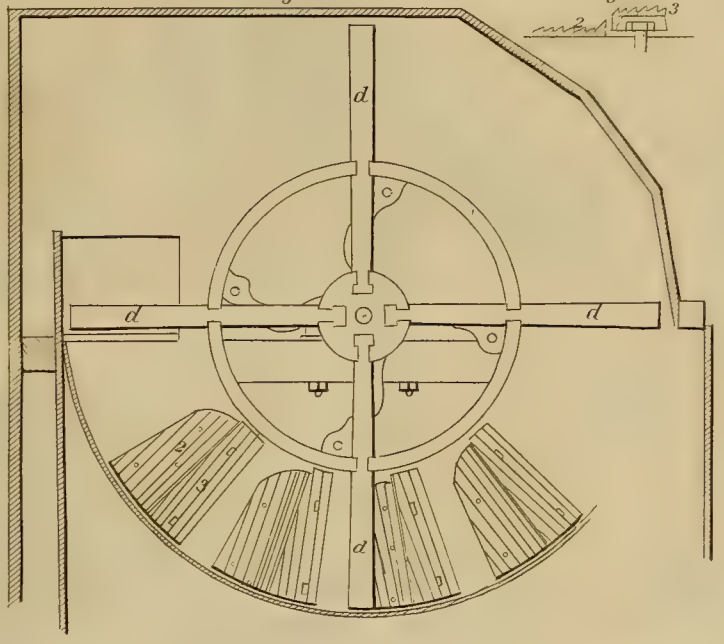

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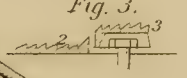

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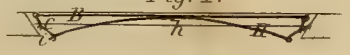

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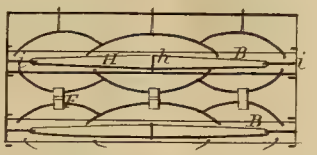

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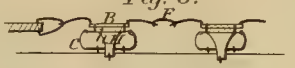

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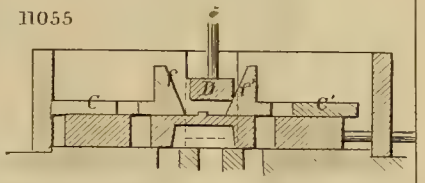

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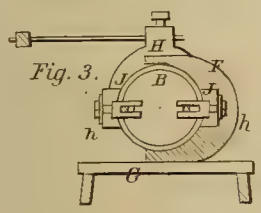

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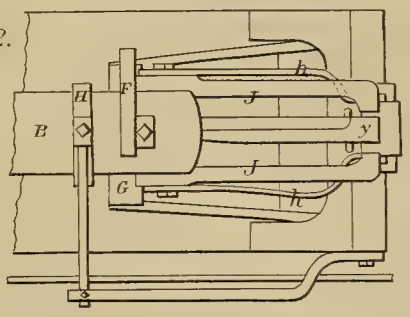

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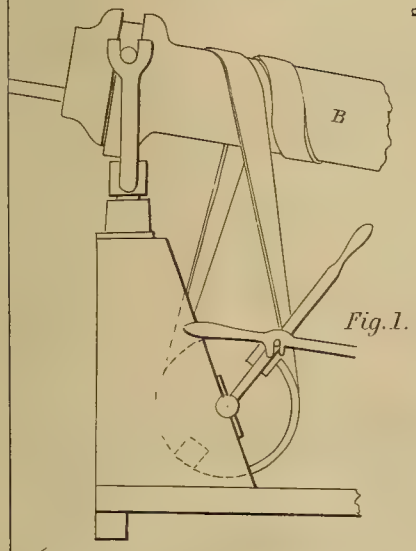

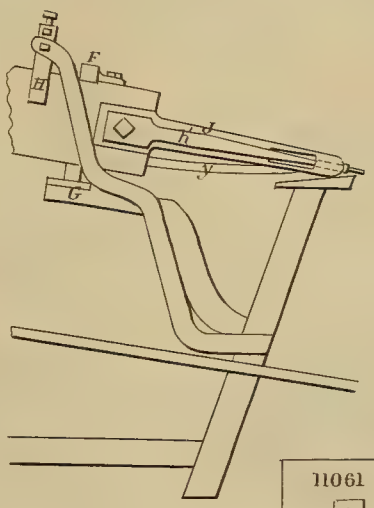

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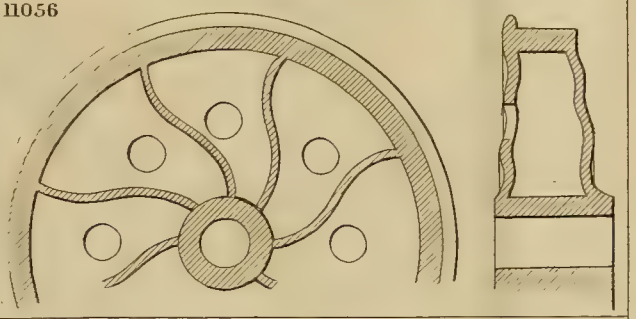

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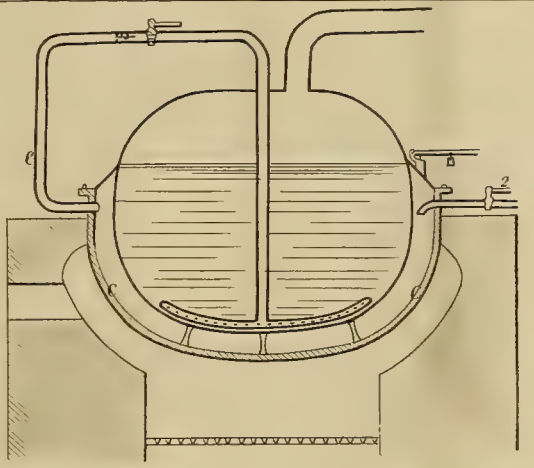

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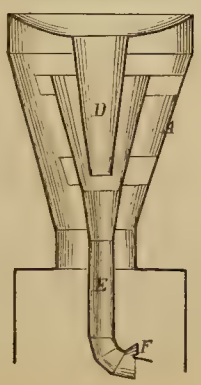

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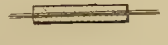

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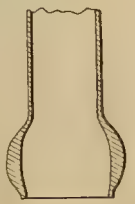

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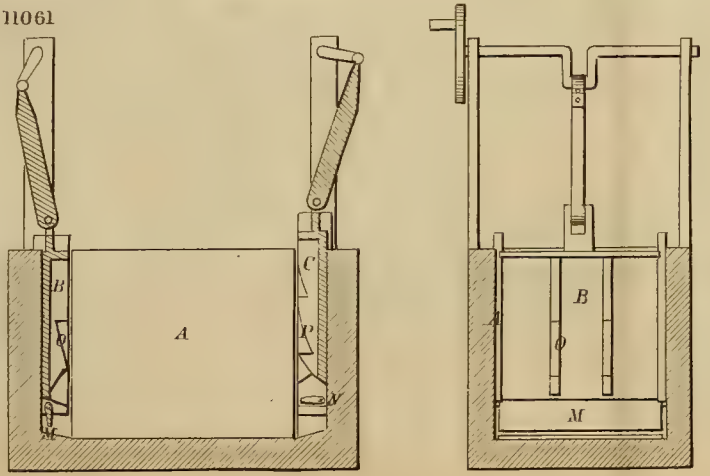

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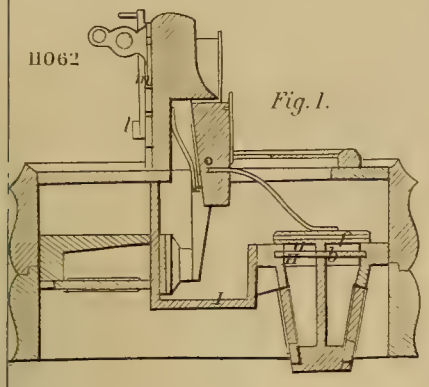

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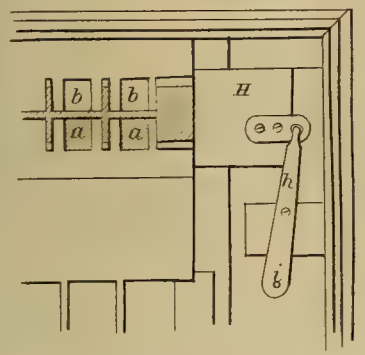

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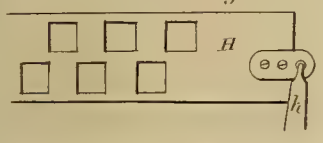

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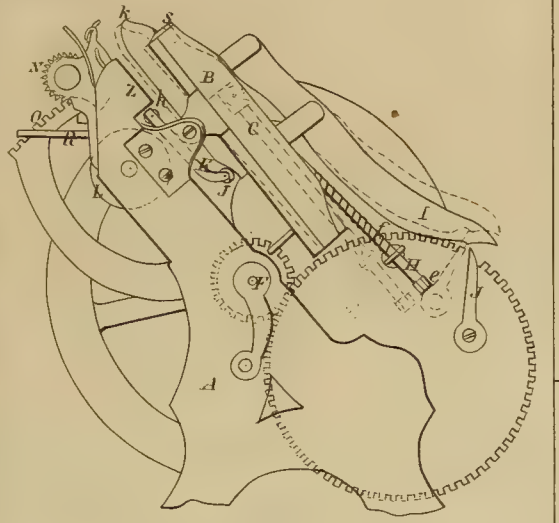

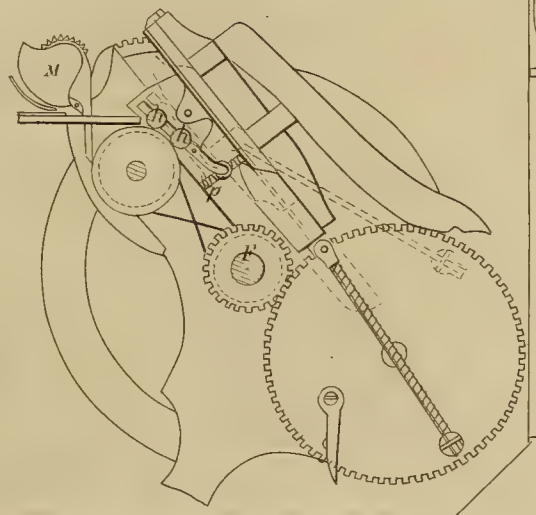

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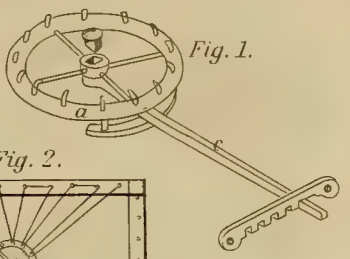

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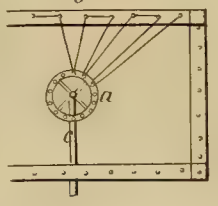

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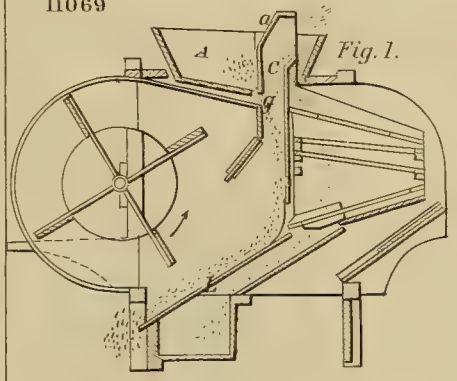

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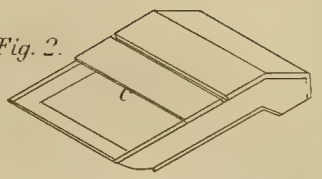

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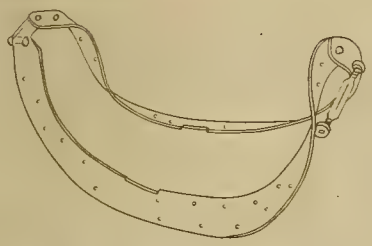
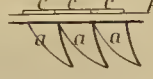


11070

Fig. 1.



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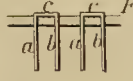

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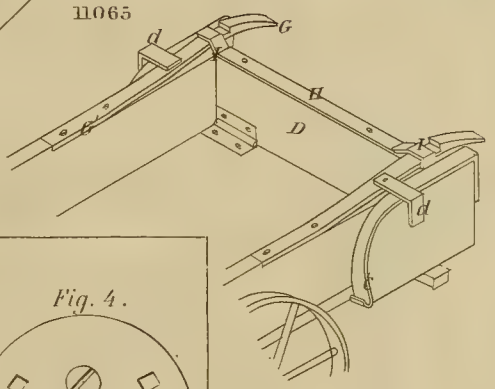

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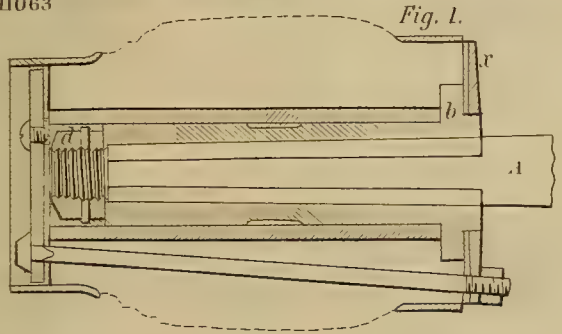

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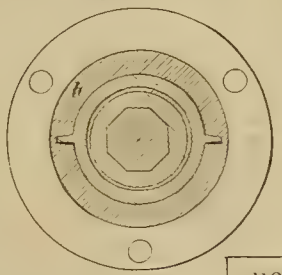

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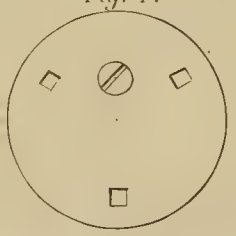

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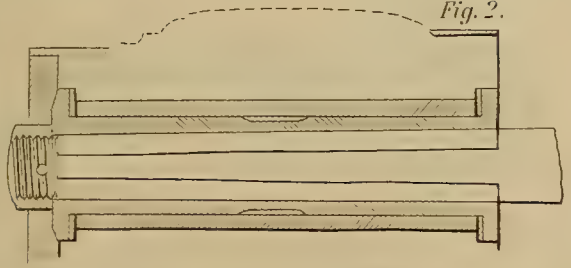

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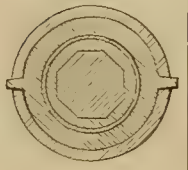

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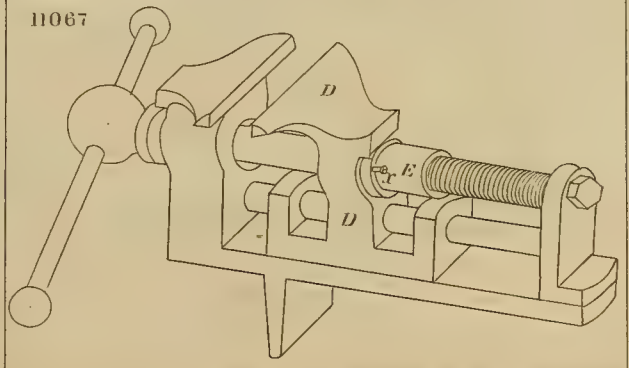

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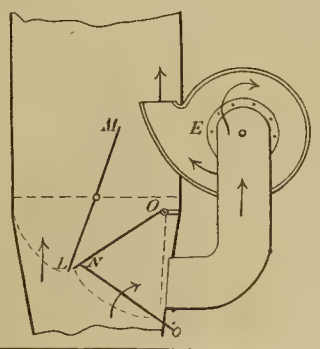

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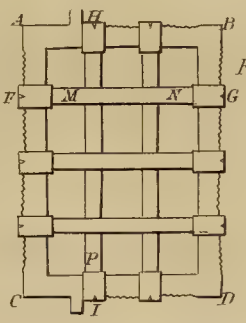

Fig. 1.

Fig. 2.

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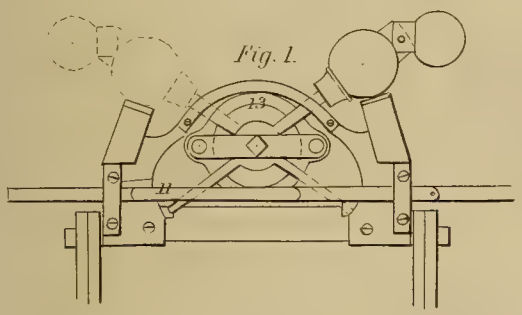

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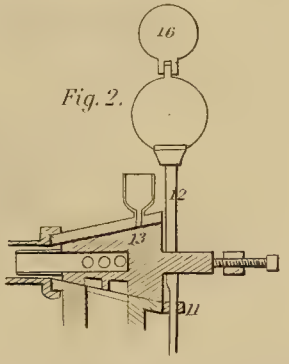

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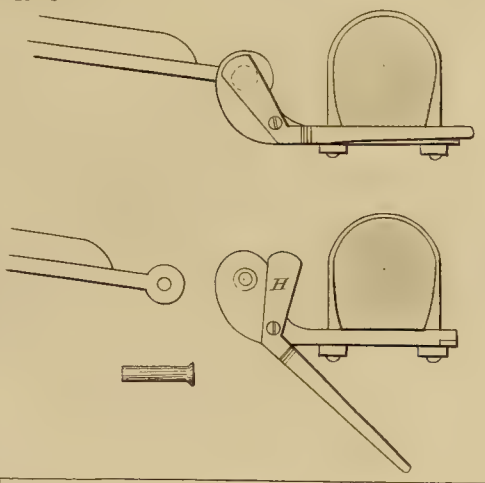

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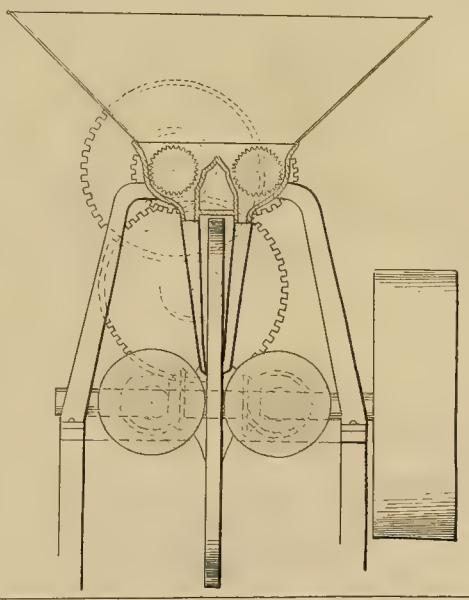

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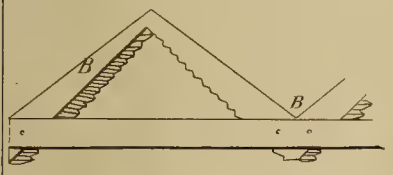

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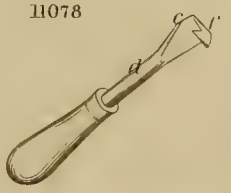

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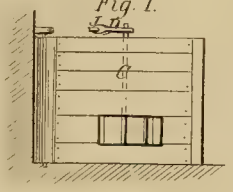

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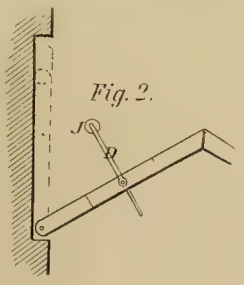

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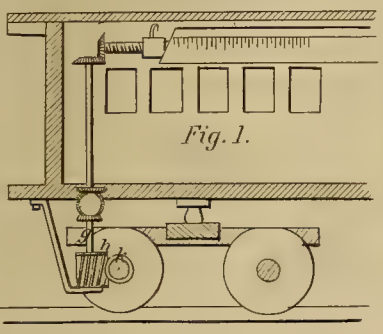

Fig. 1.

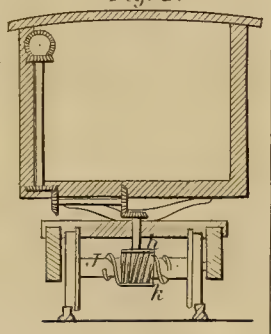

Fig. 2.

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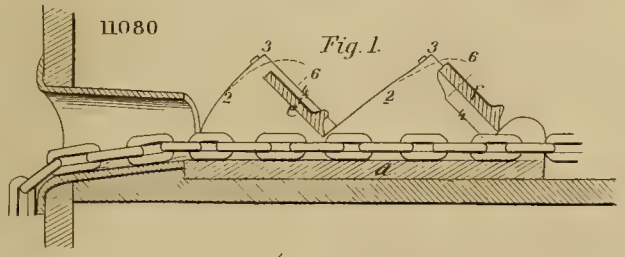

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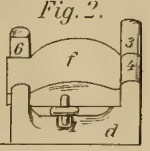

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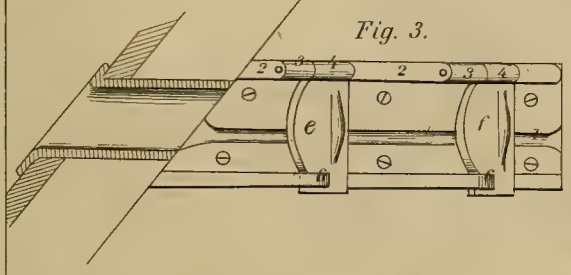

Fig. 3.

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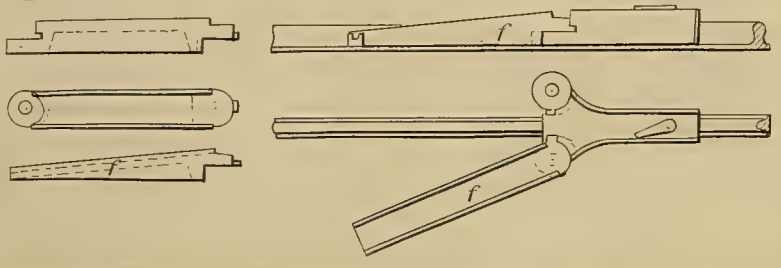

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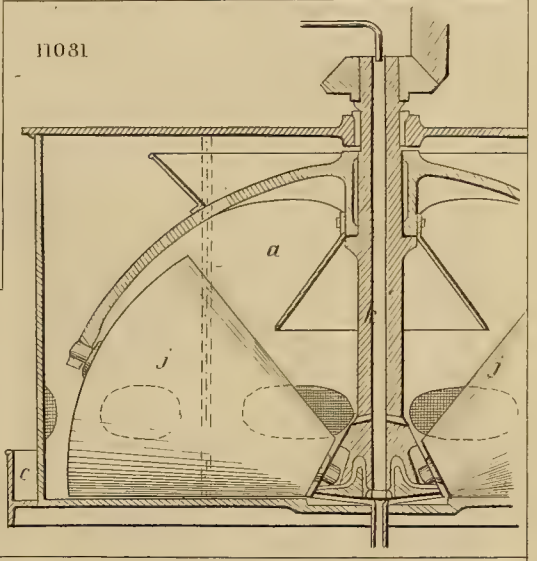

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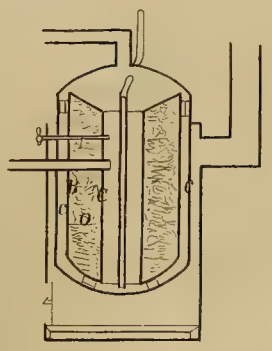

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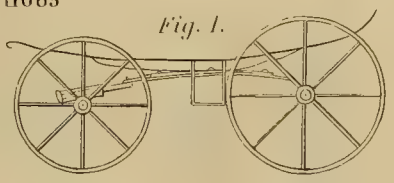

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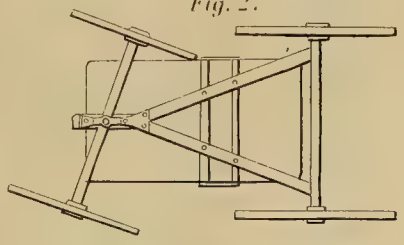

Fig. 3.

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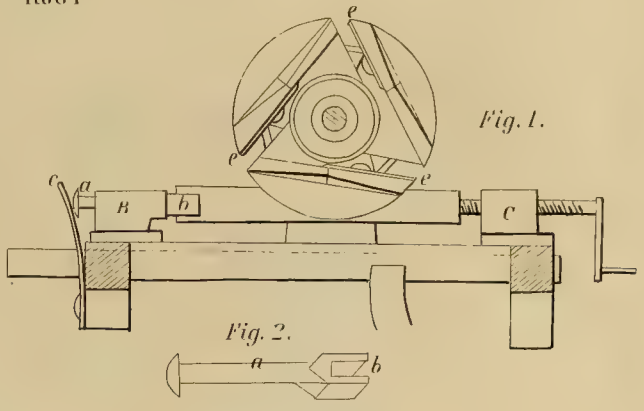

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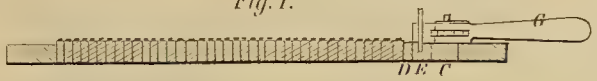

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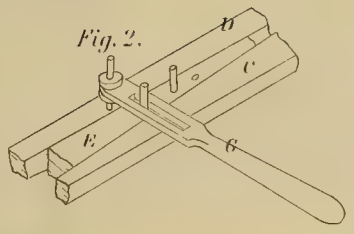

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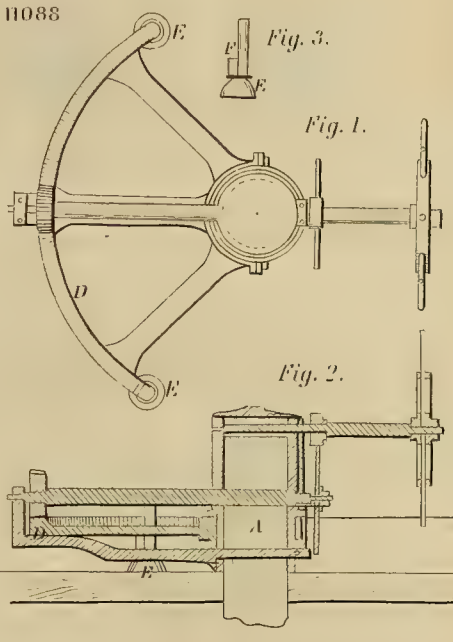

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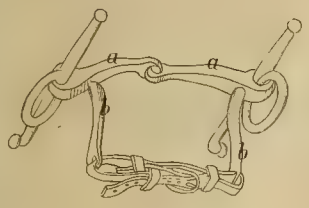

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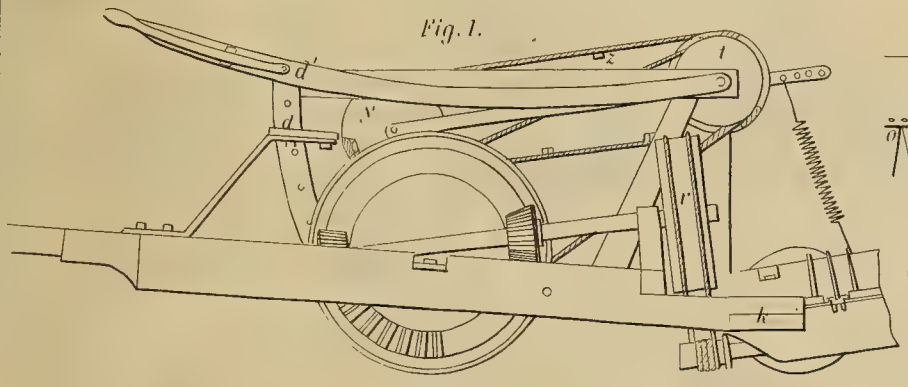

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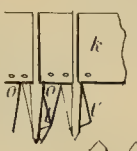

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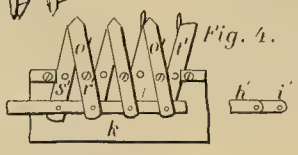

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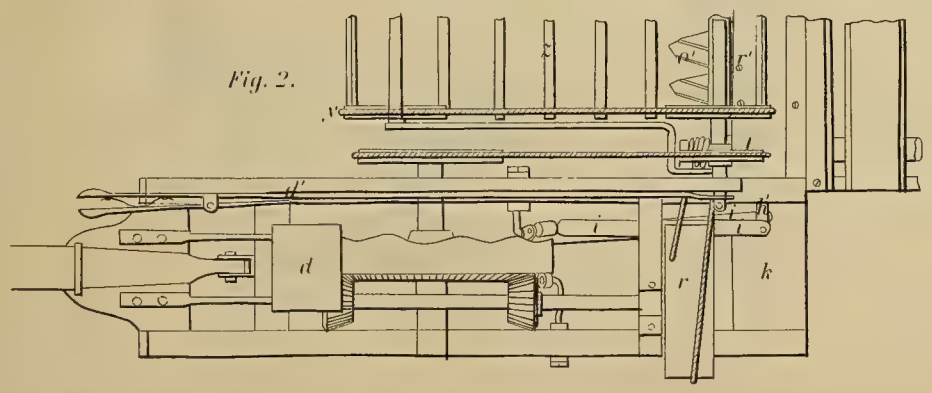

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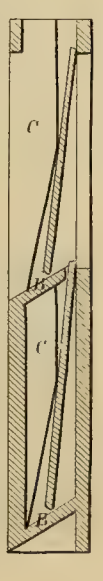

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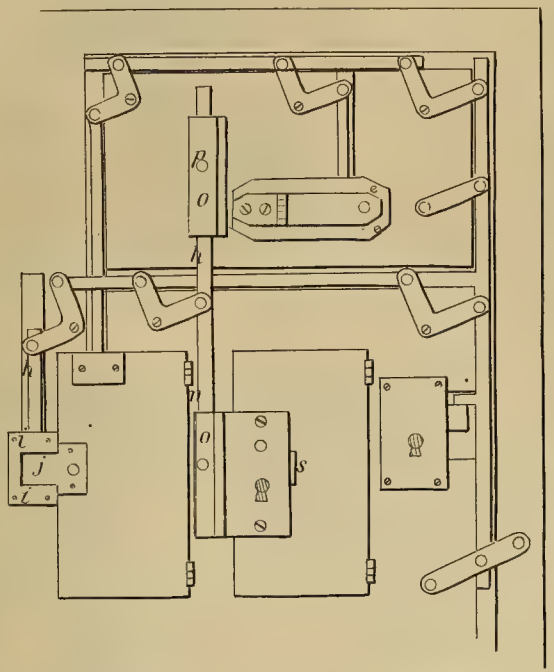

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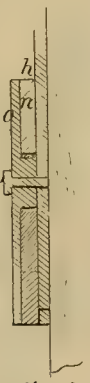

Fig. 3.

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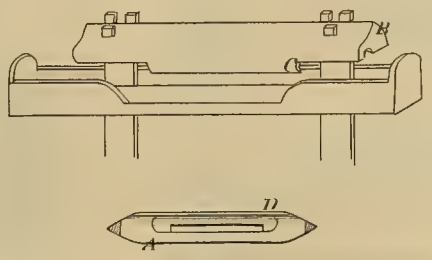

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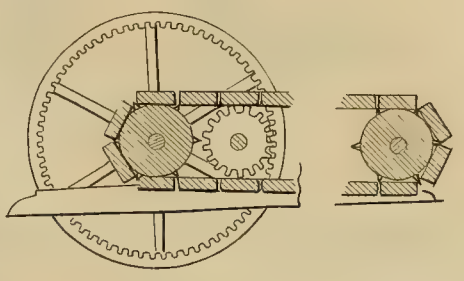

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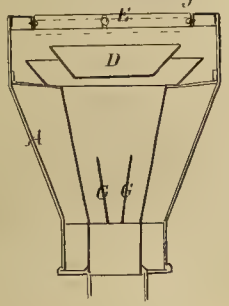

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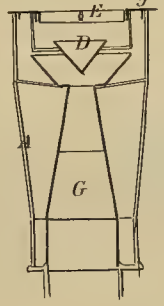

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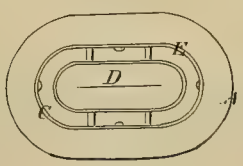

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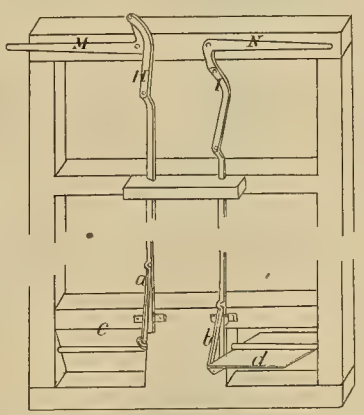

Fig. 2.

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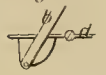

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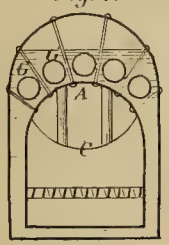

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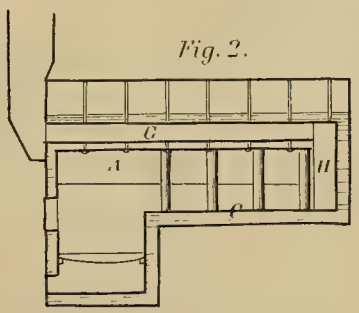

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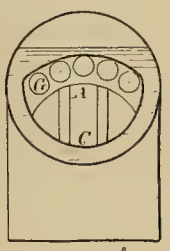

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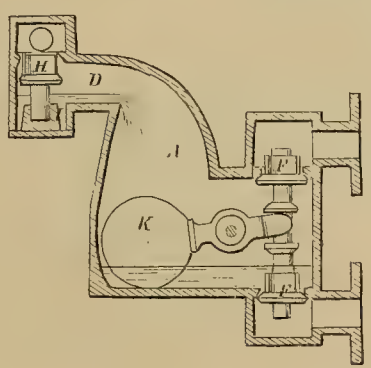

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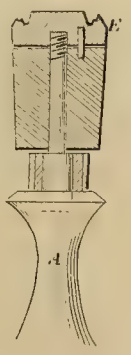

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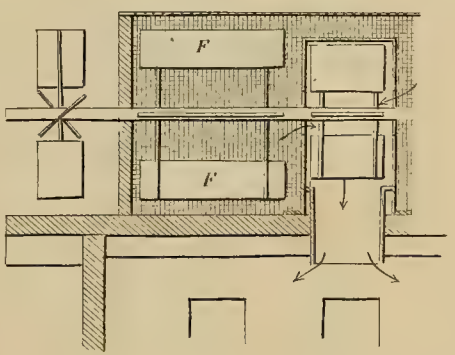

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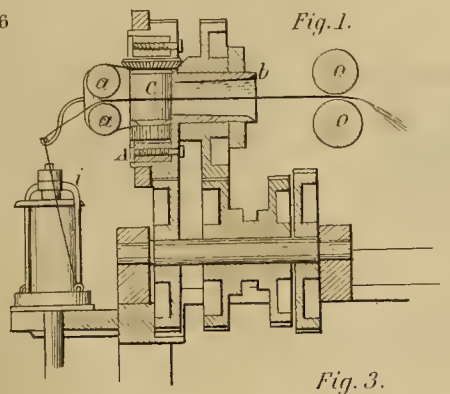

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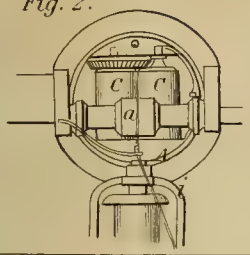
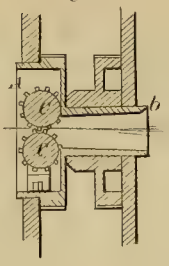


Fig. 3.



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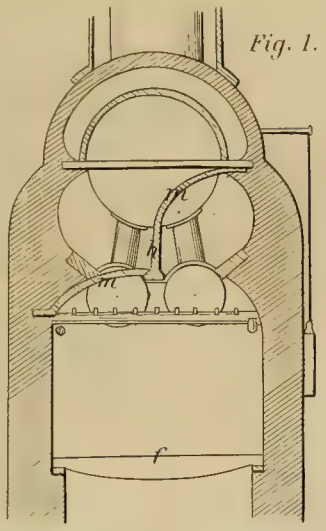

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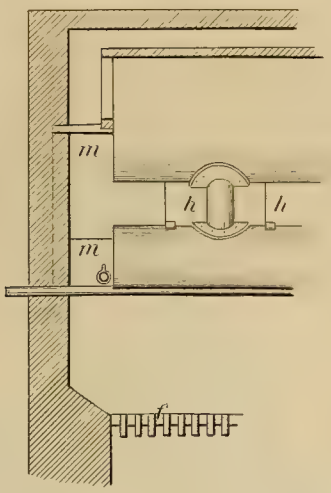

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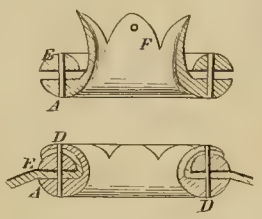

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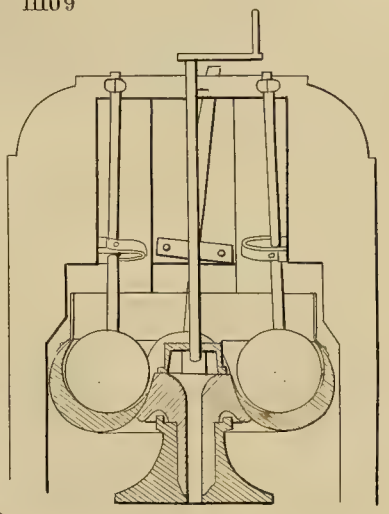

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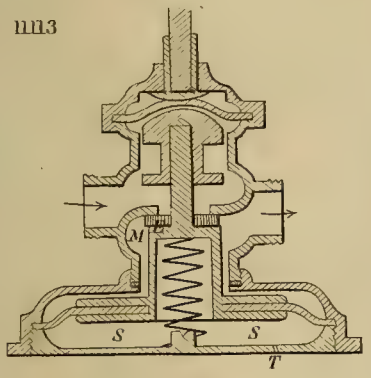

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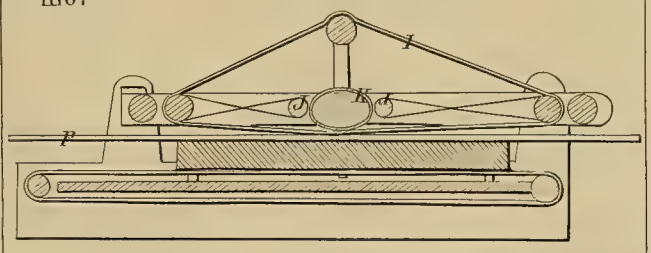

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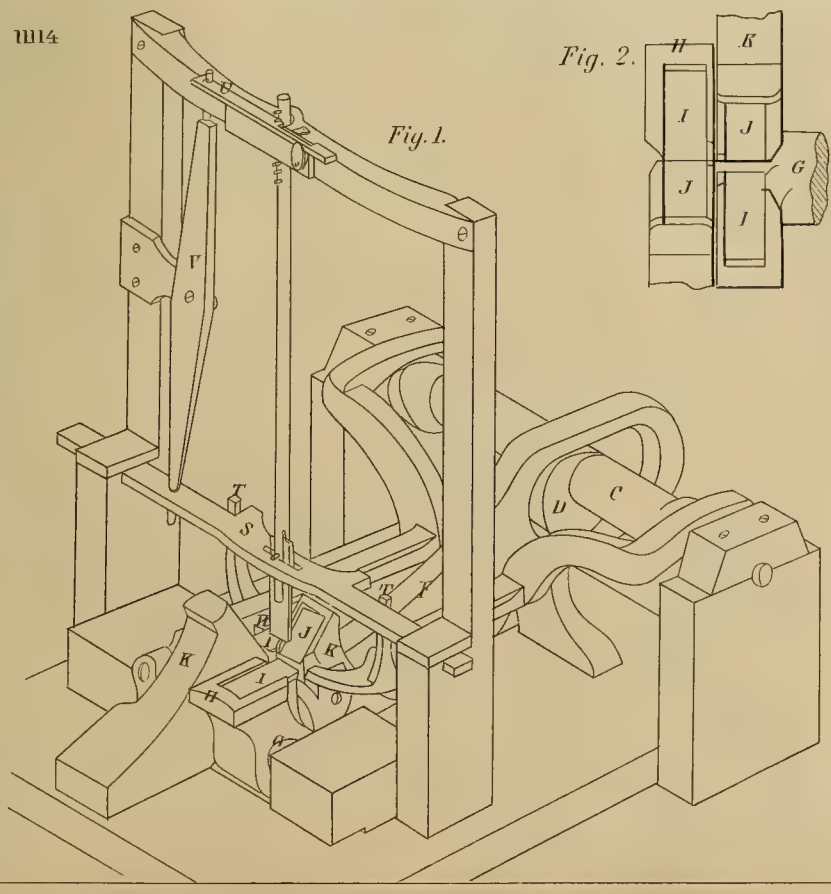

Fig. 2.

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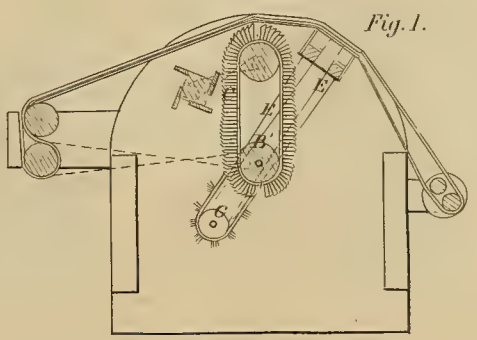

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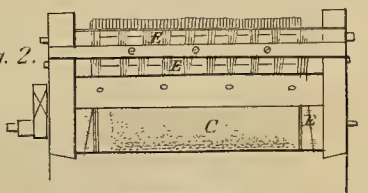

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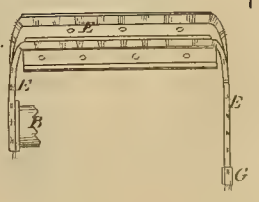

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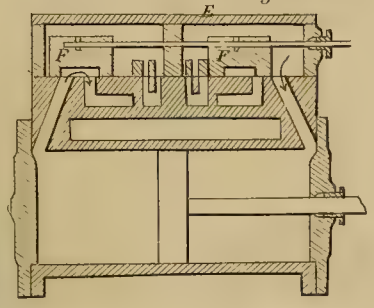

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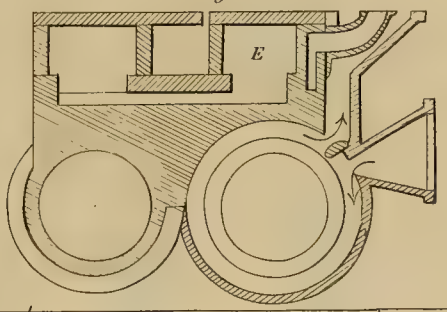

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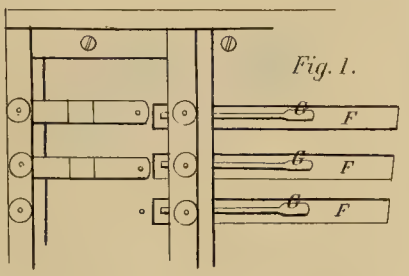

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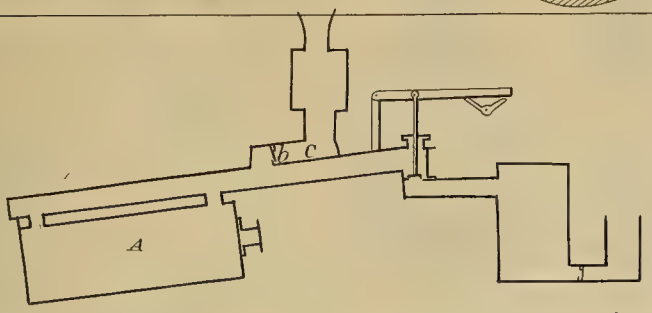

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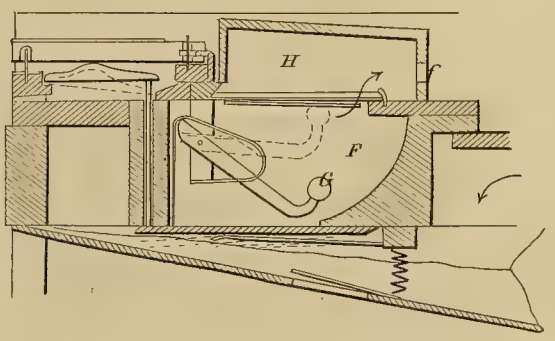

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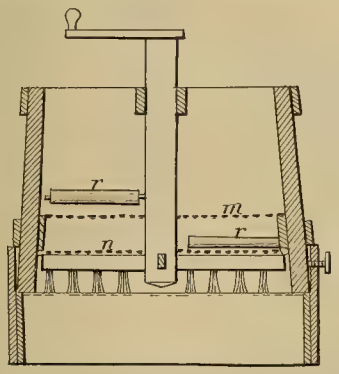

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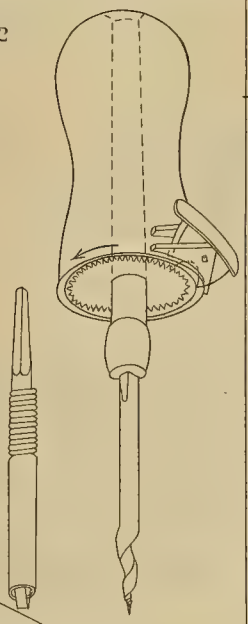

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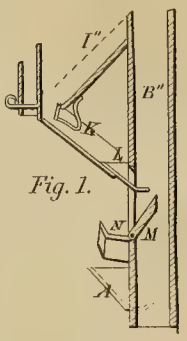

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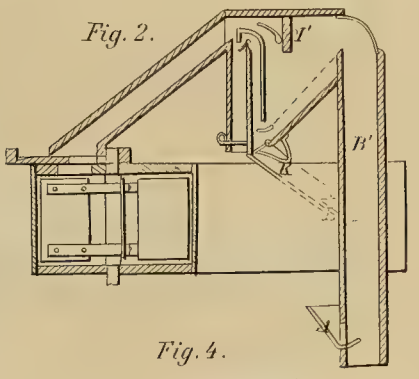

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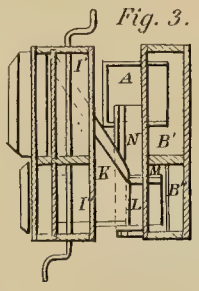

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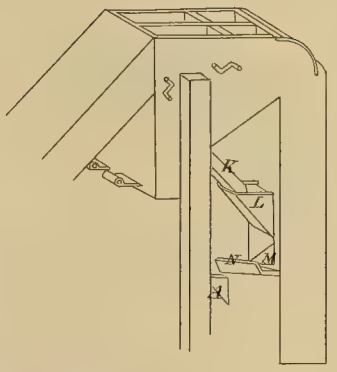

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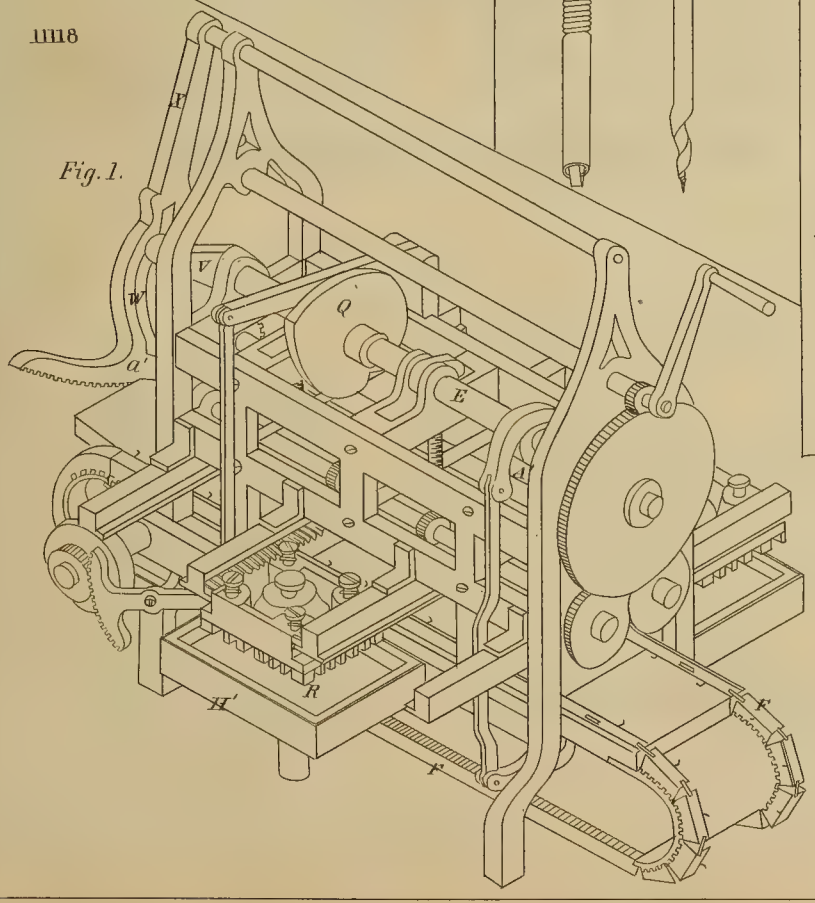

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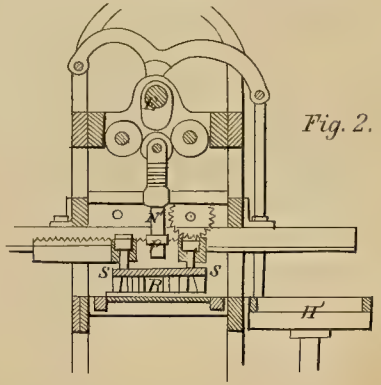

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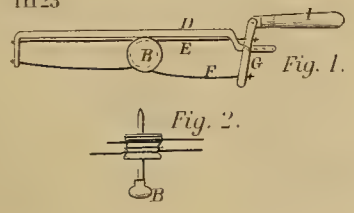

Fig. 1.

Fig. 2.

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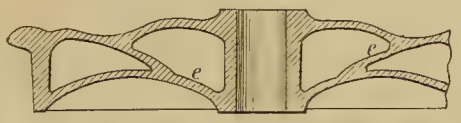

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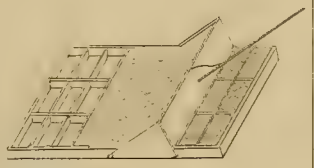

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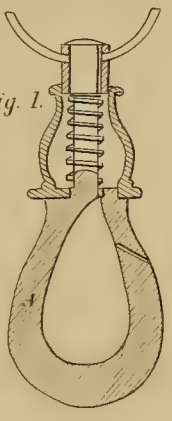

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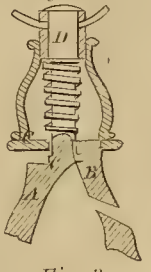

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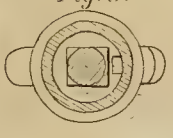

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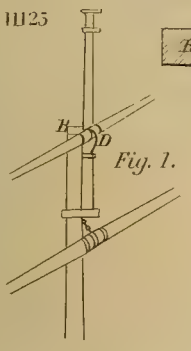

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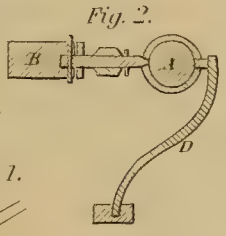

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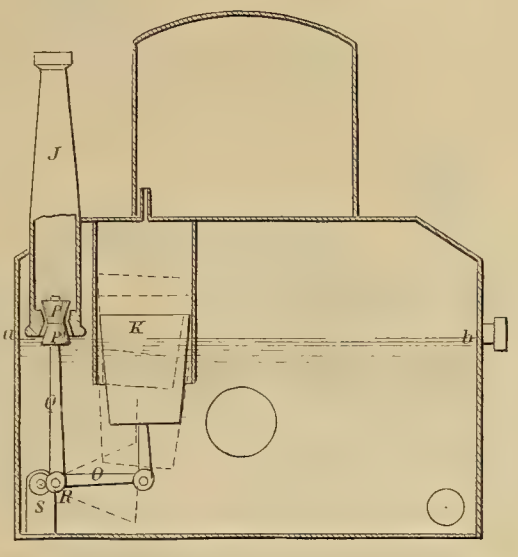

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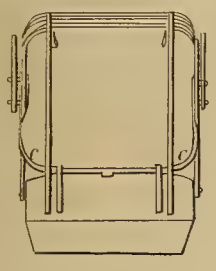

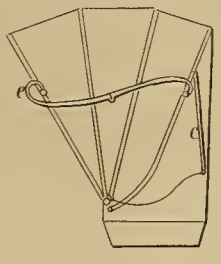

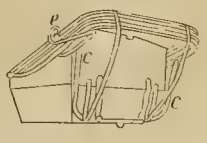

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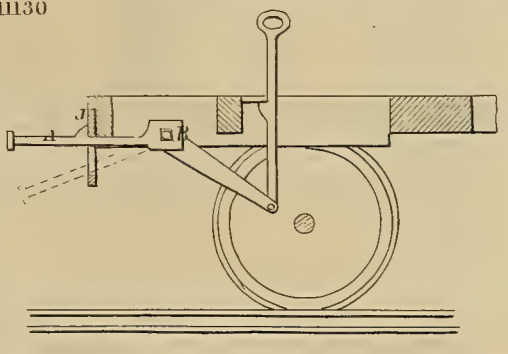

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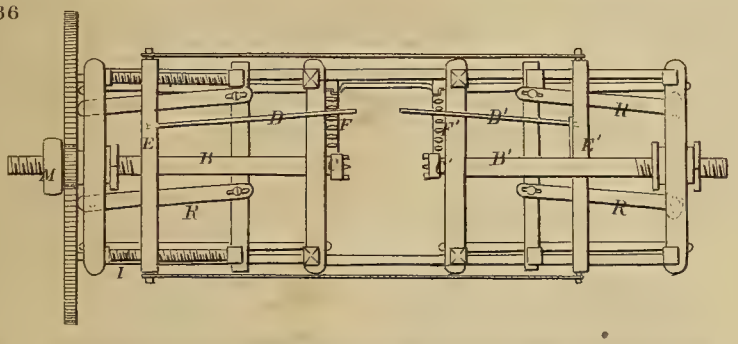

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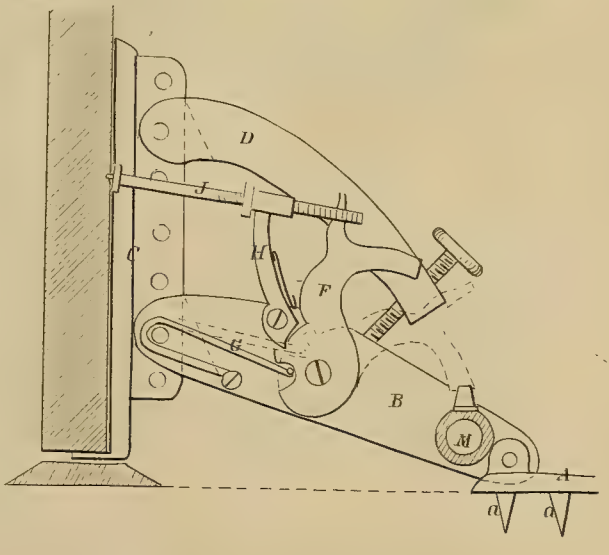

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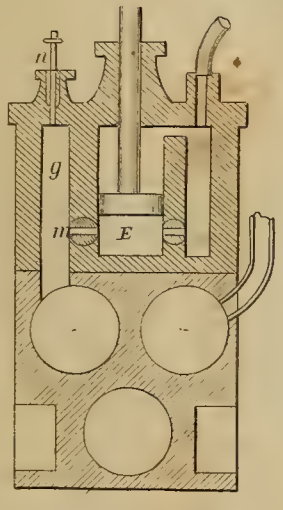

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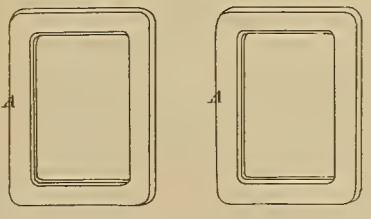

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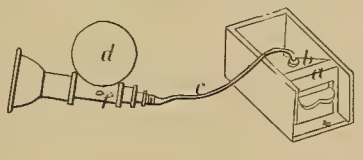

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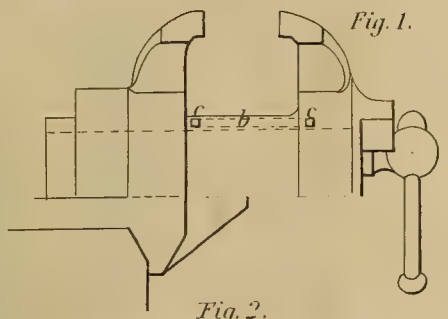

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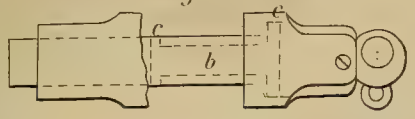

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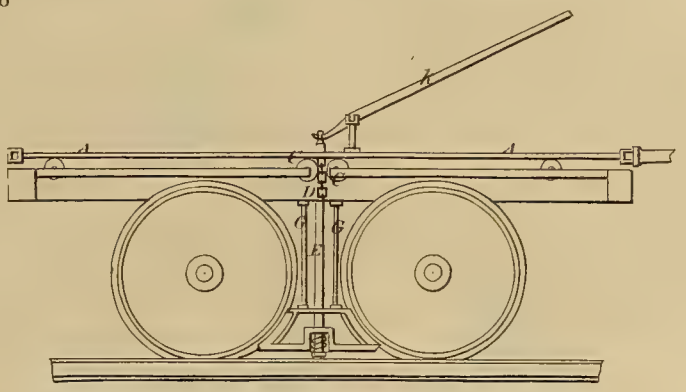

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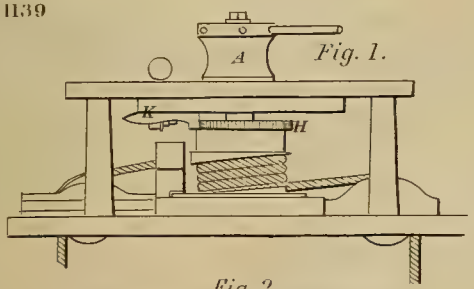

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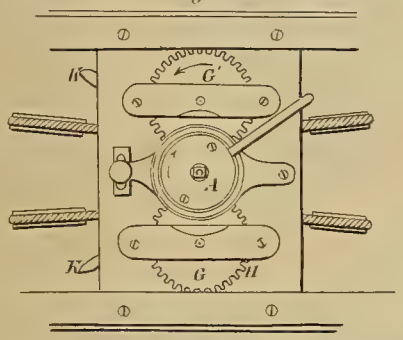

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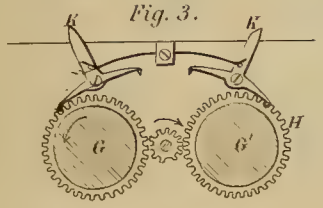

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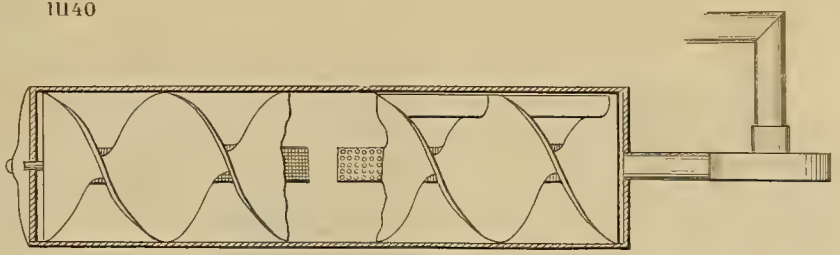

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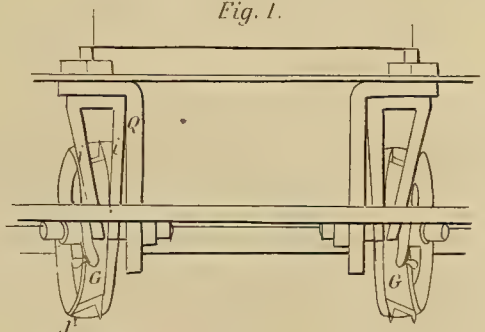

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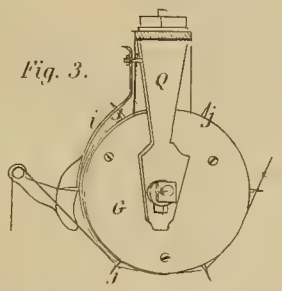

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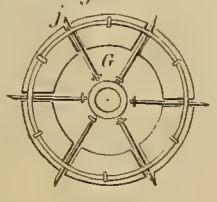

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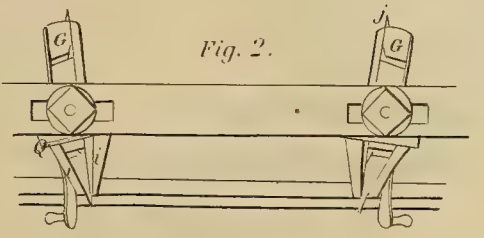

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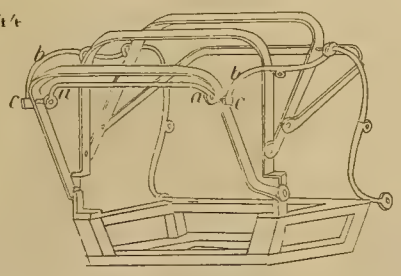

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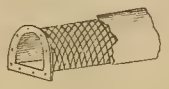

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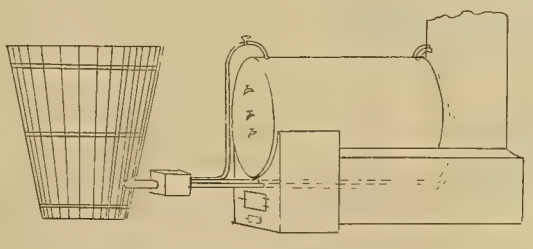

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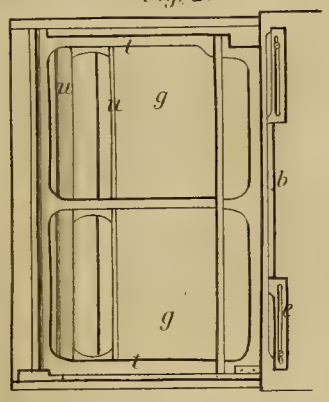
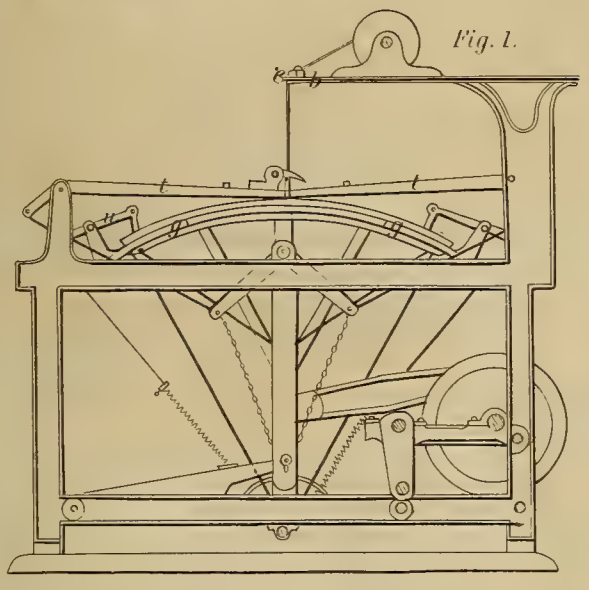


Fig. 1.



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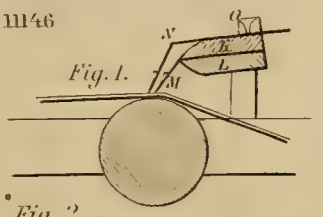

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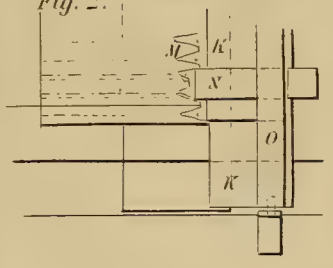

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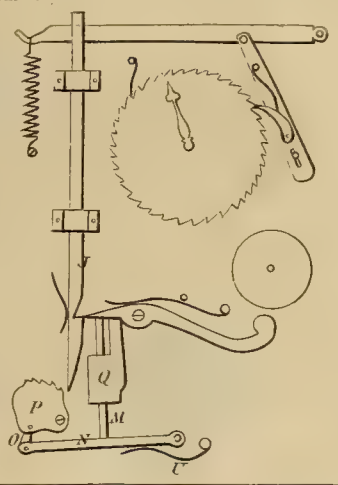

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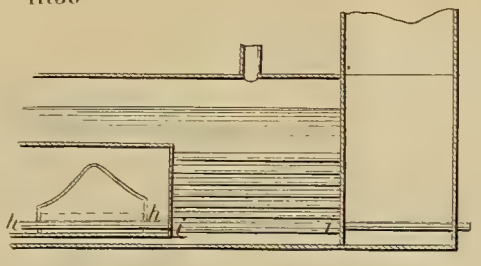

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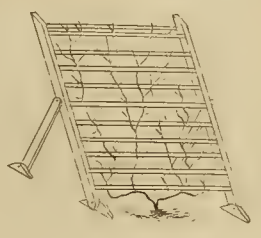

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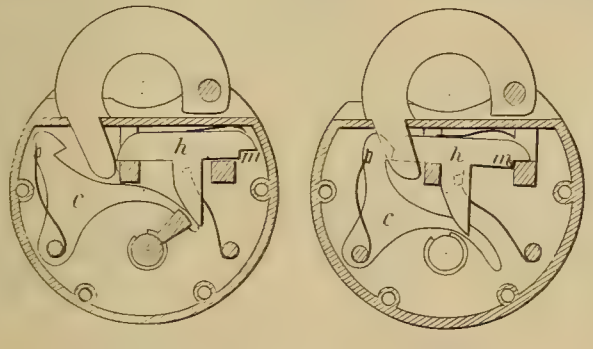

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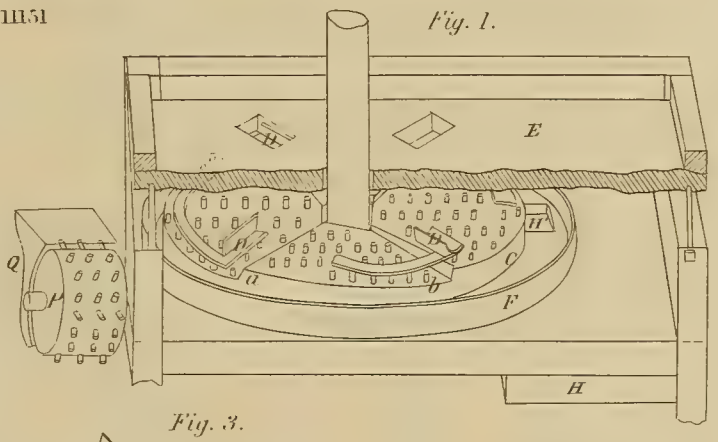

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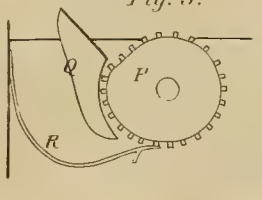

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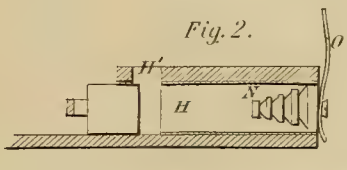

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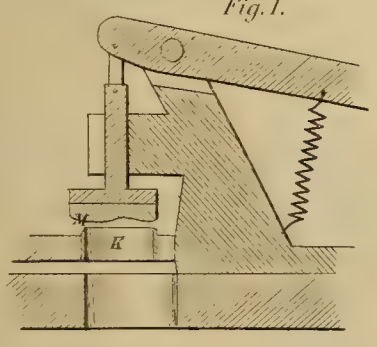

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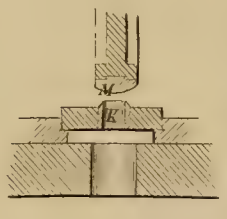

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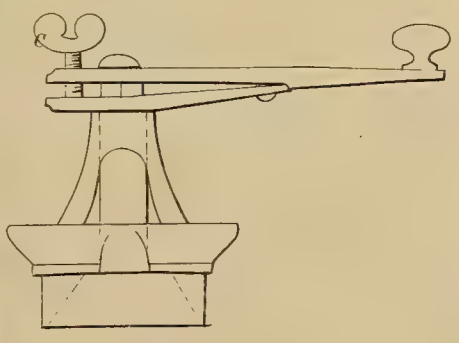

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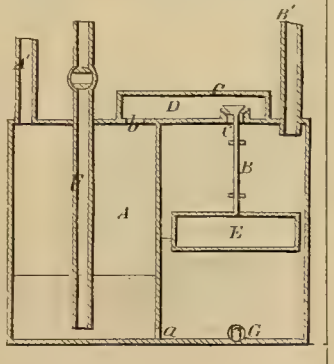

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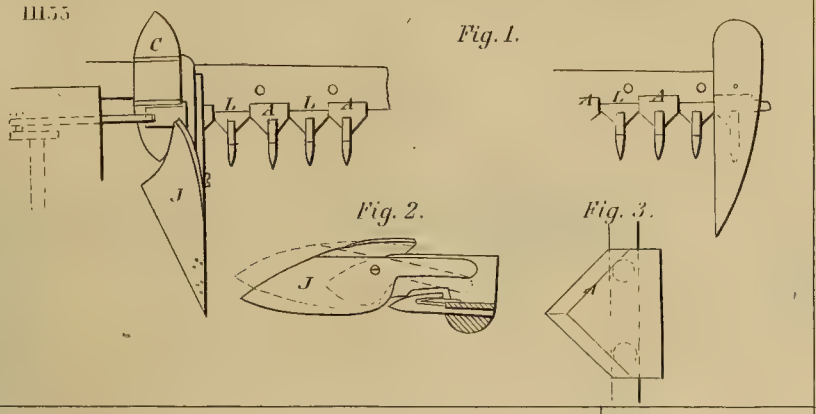

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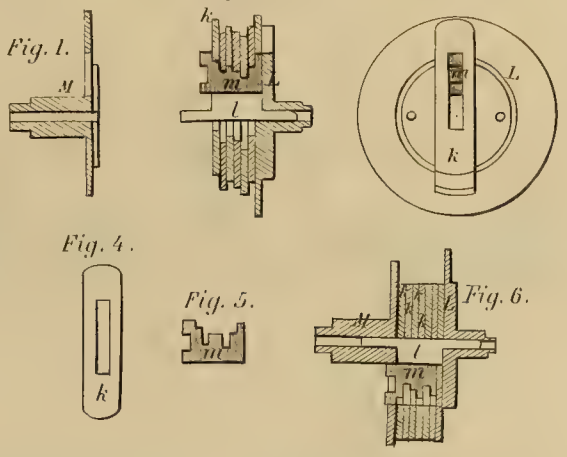

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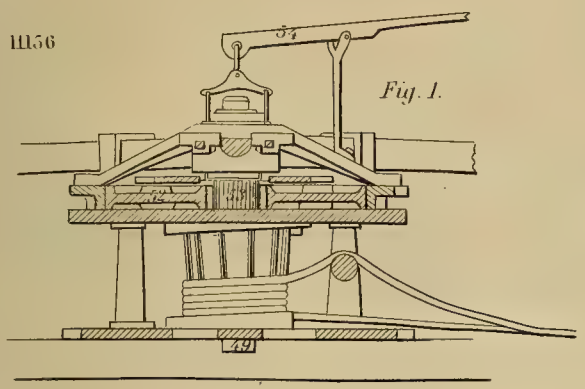

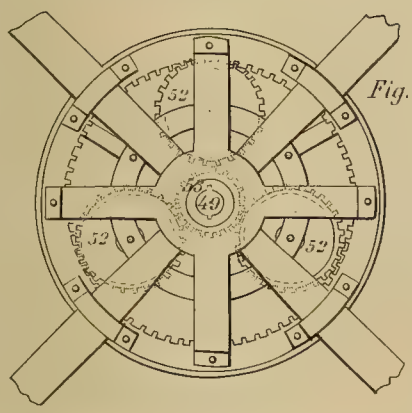

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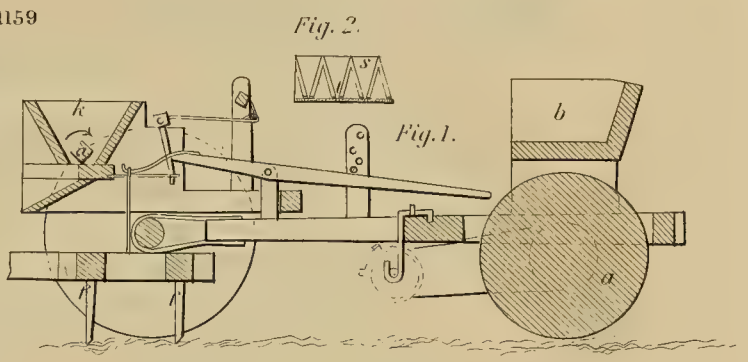

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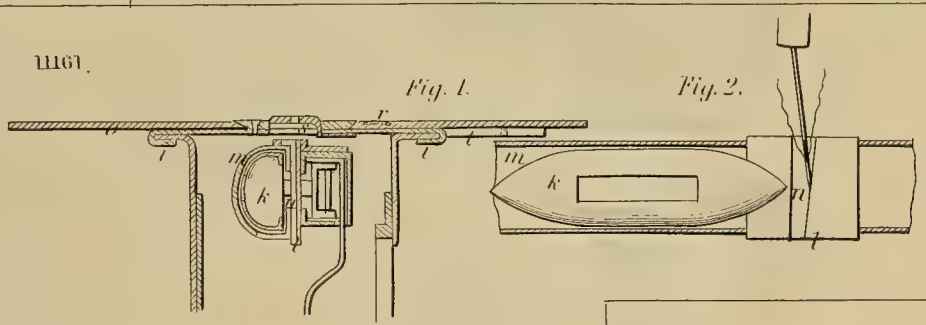

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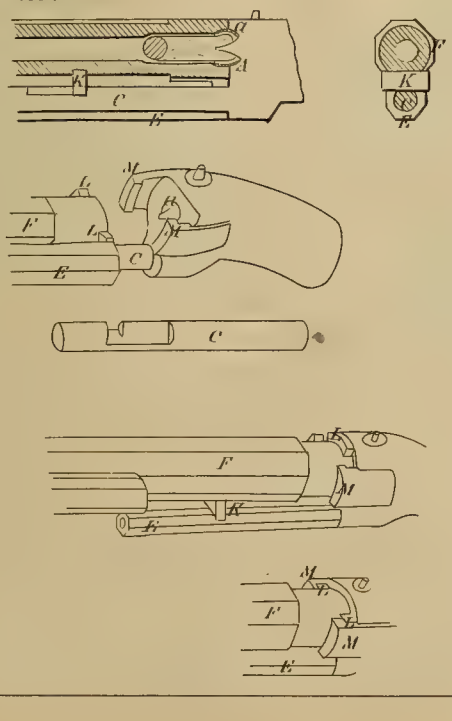

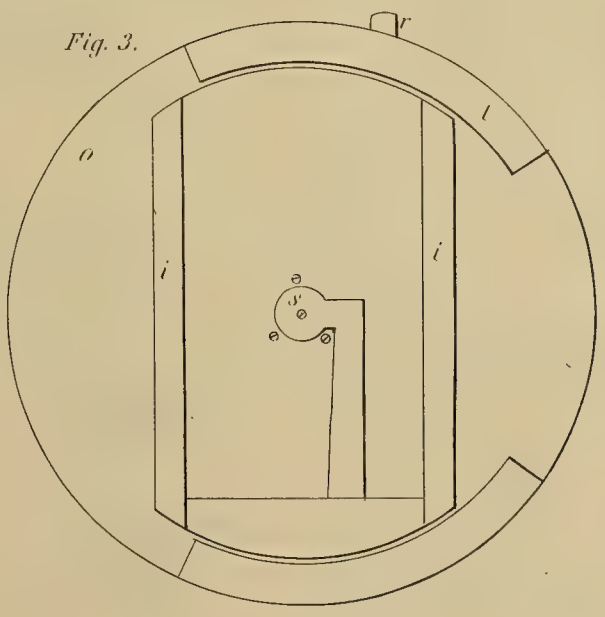

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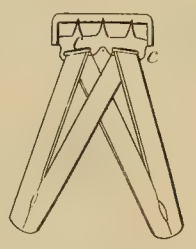

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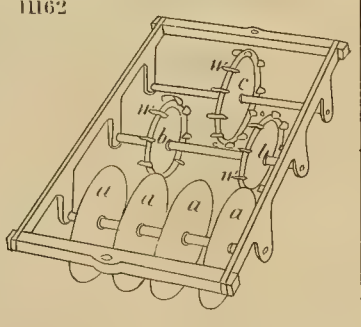

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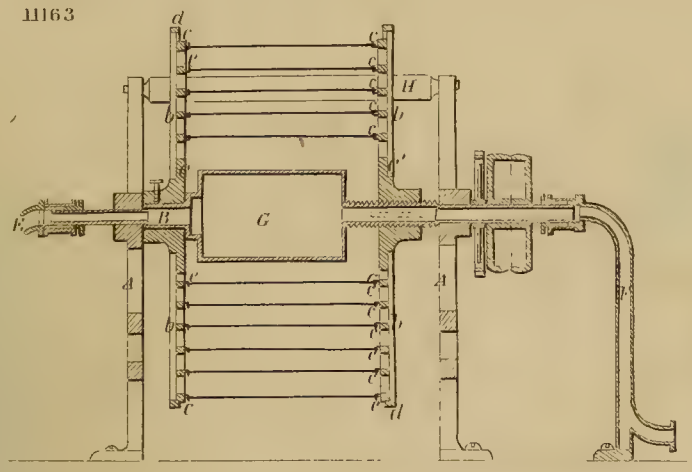

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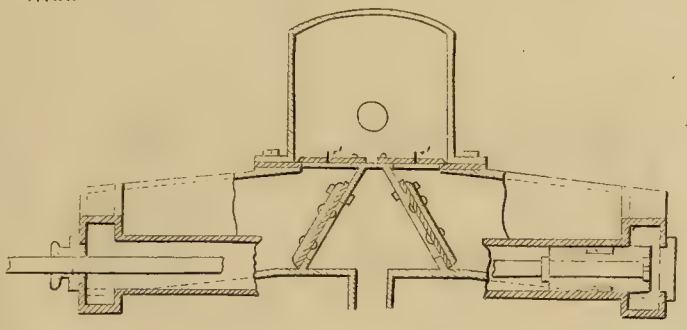

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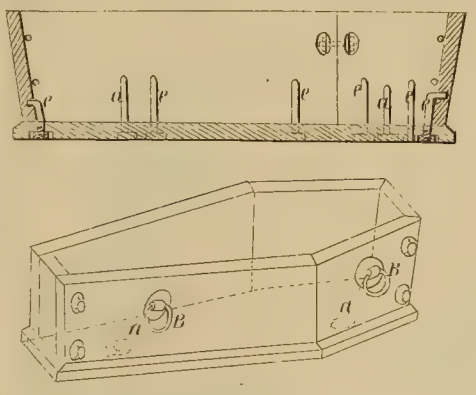

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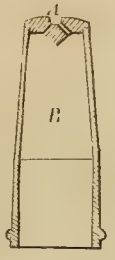

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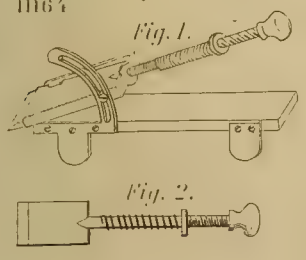

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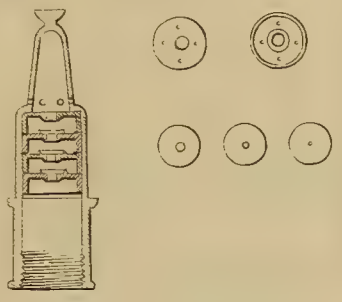

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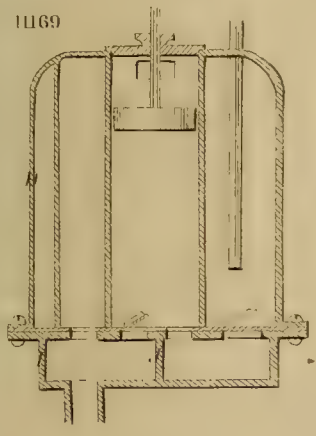

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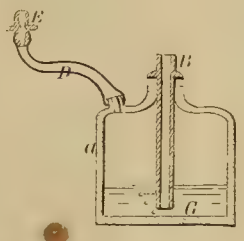

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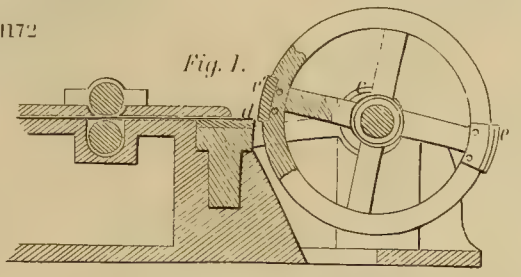

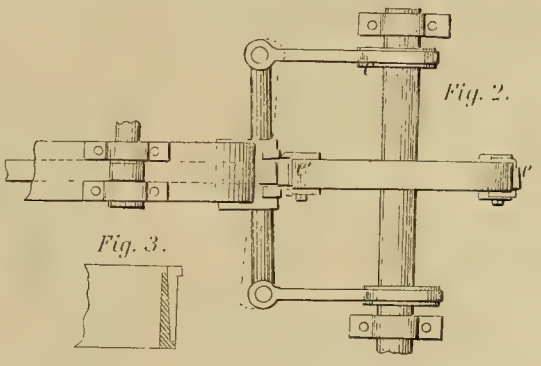

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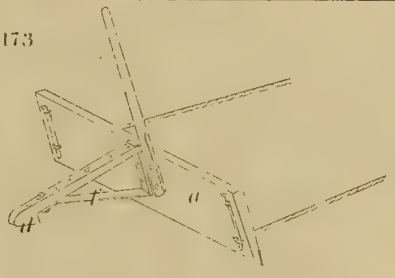

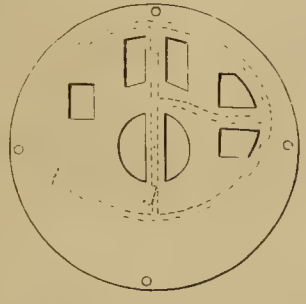

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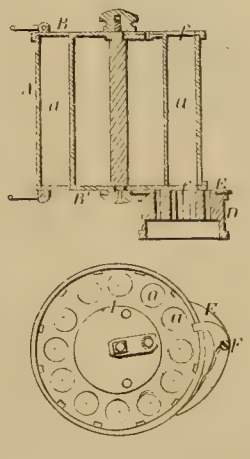

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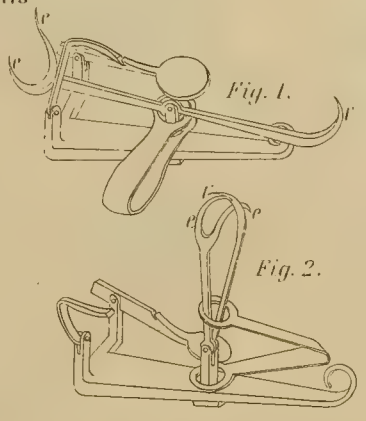

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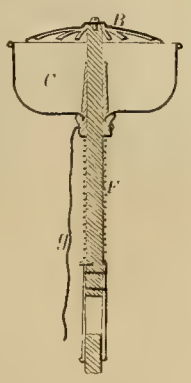

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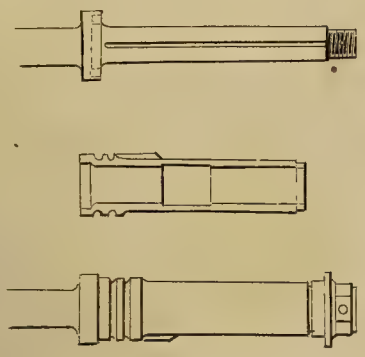

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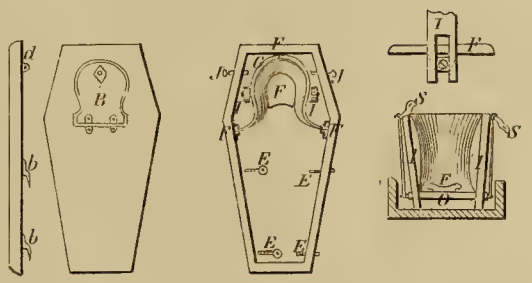

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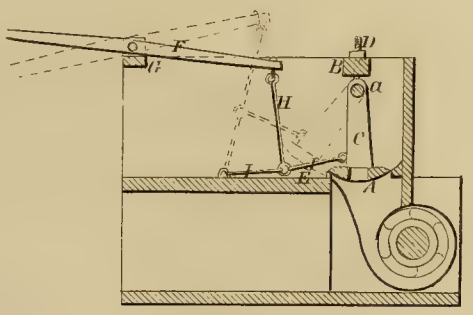

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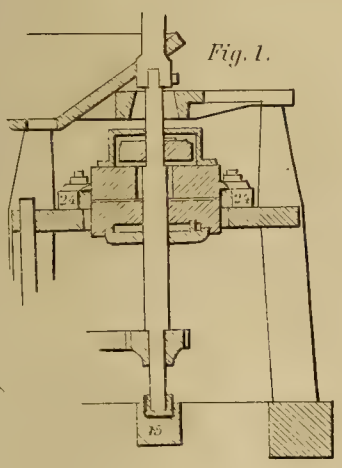

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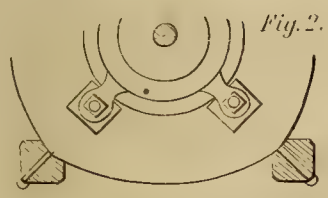

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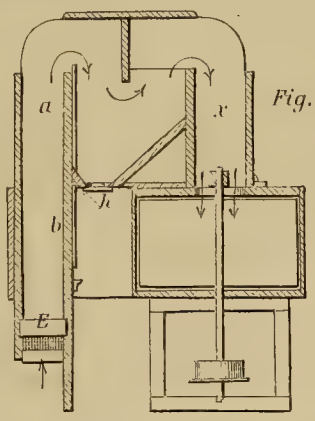

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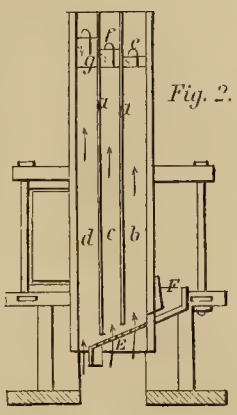

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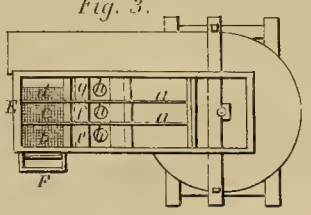

Fig. 3.

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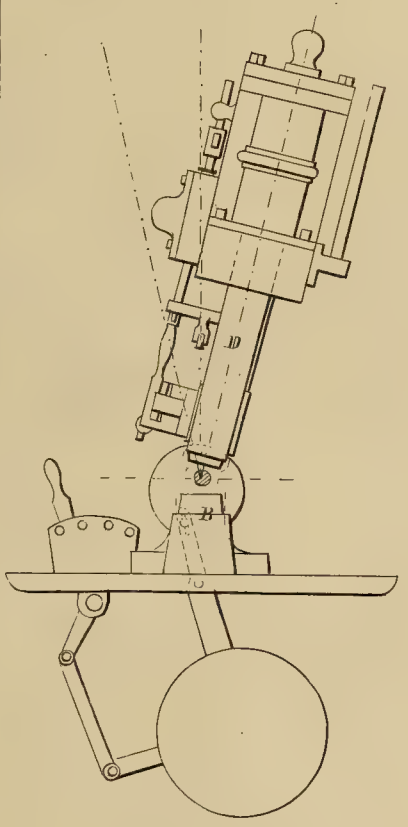

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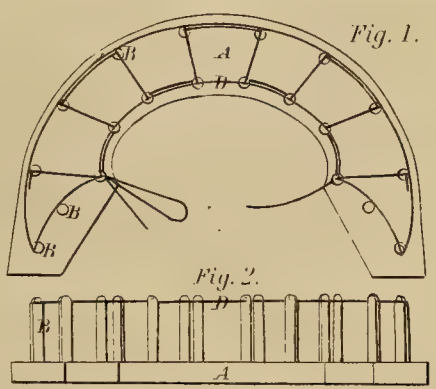

Fig. 1.

Fig. 2.

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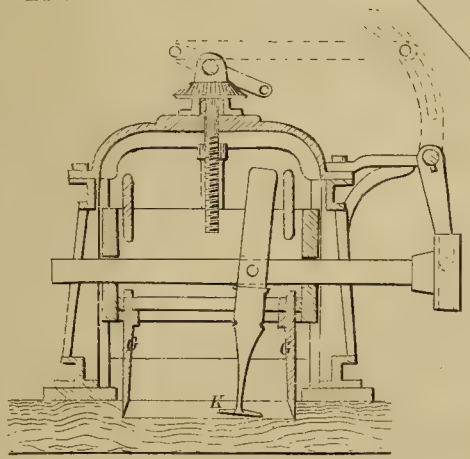

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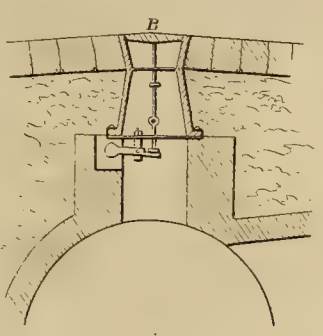

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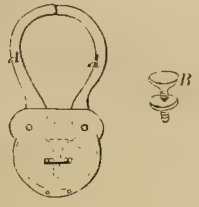

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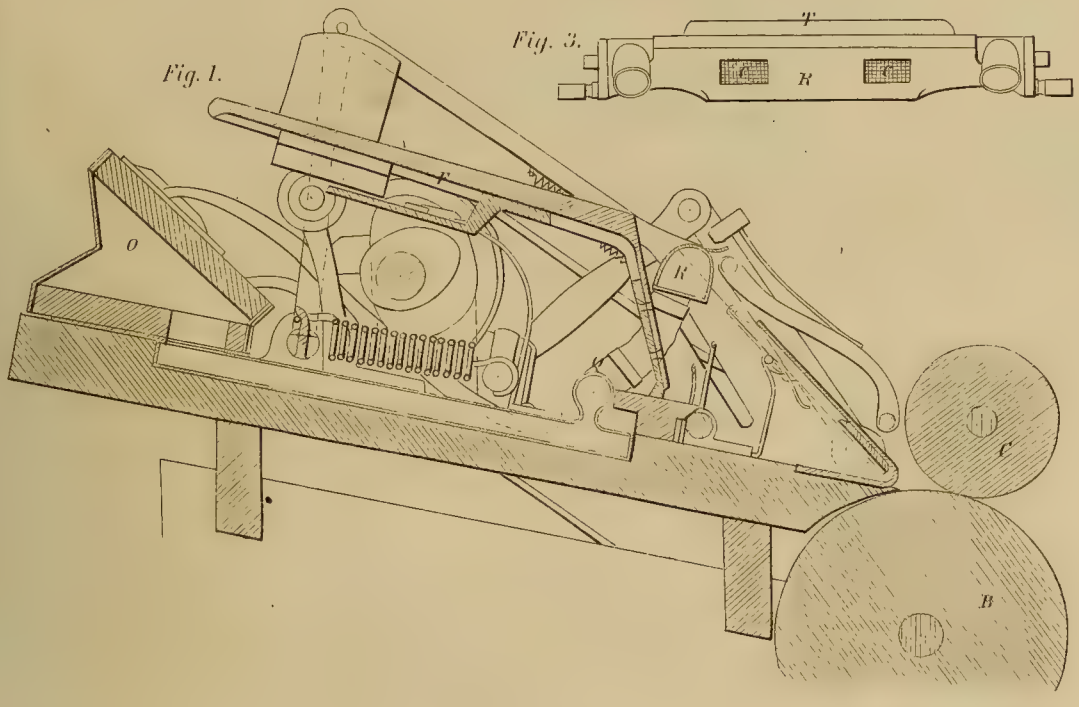
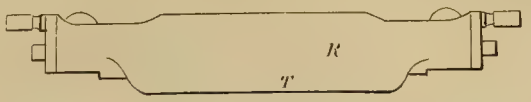


Fig. 2.



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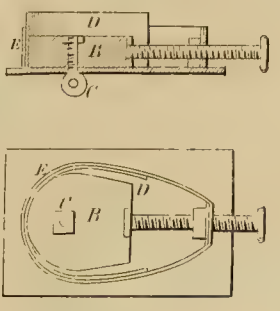

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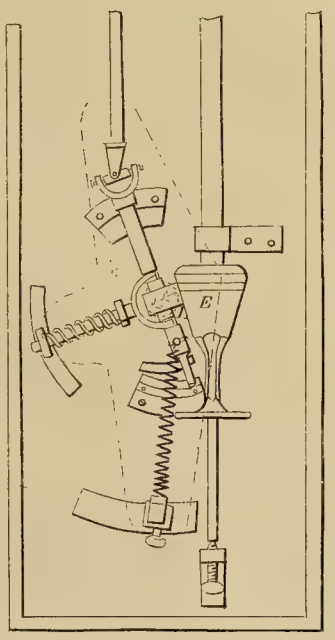

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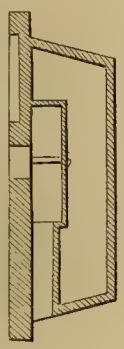

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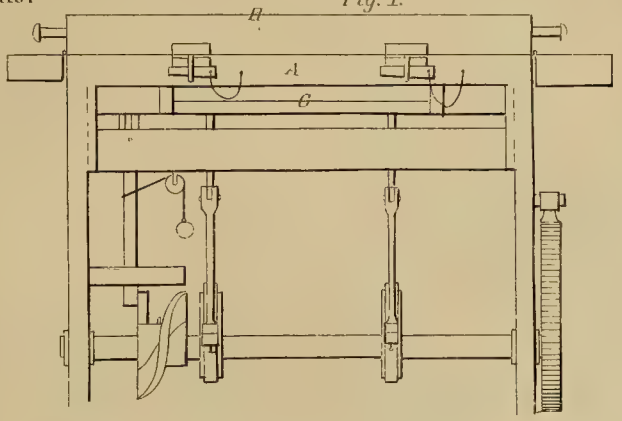

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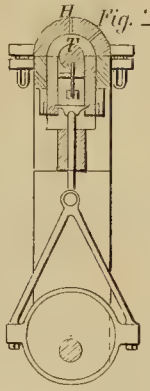

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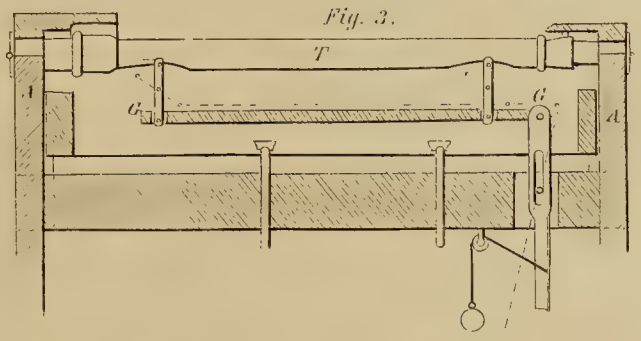

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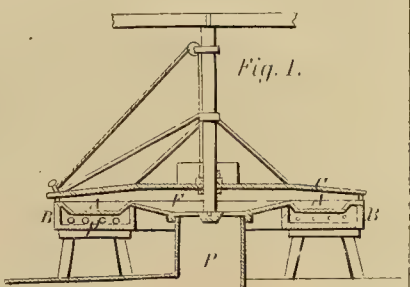

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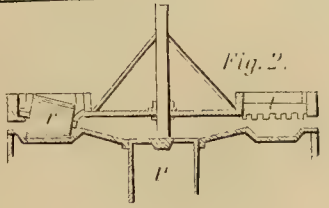

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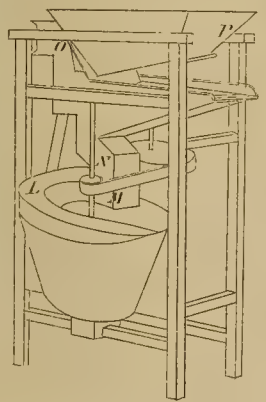

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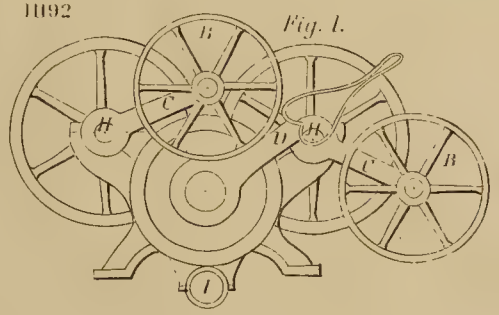

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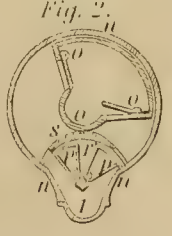

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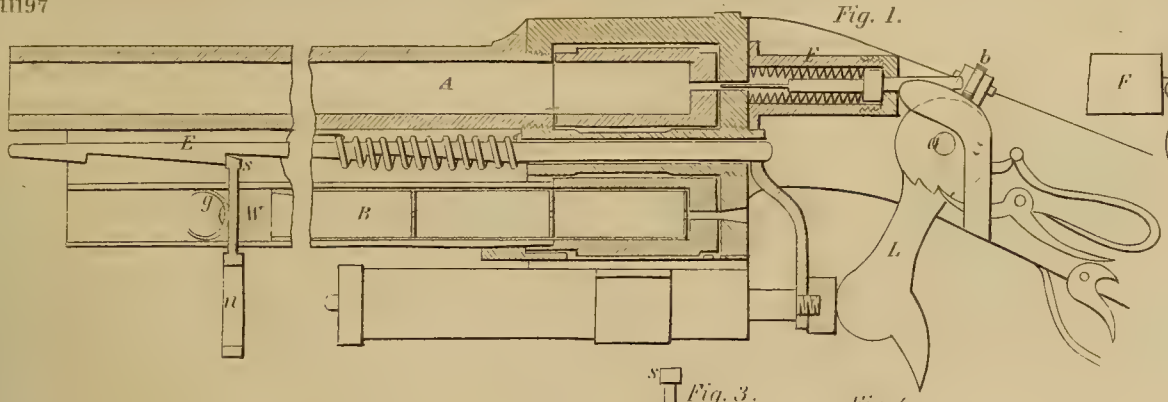

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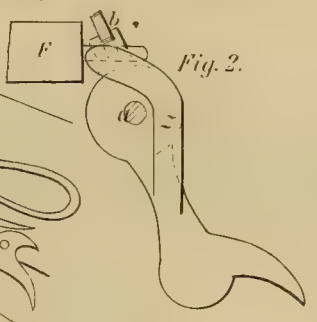

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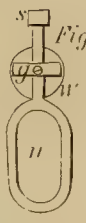

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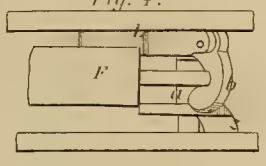

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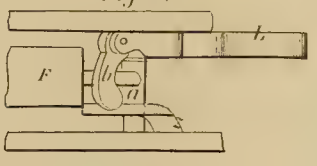

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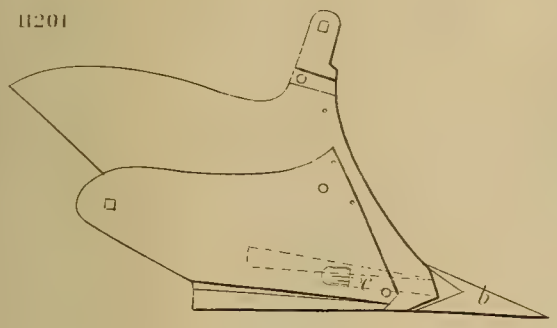

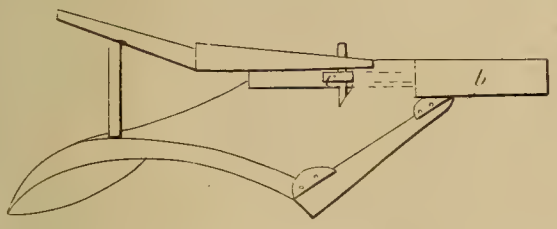

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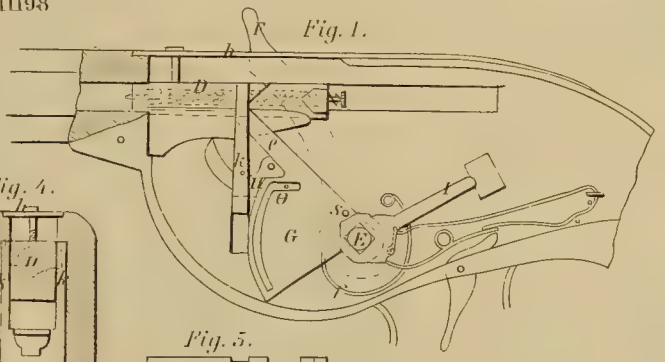

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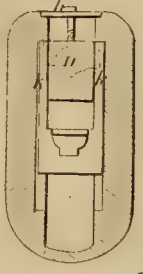

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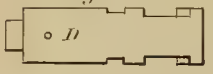

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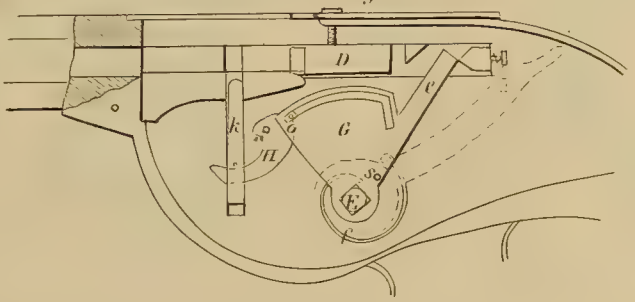

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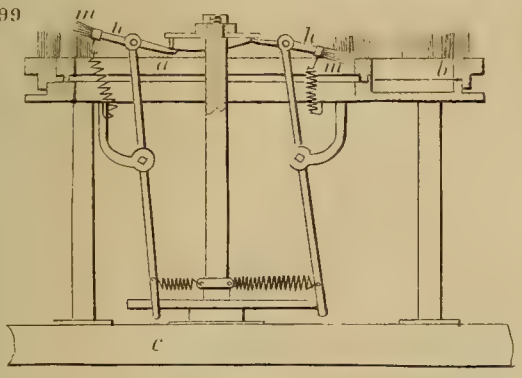

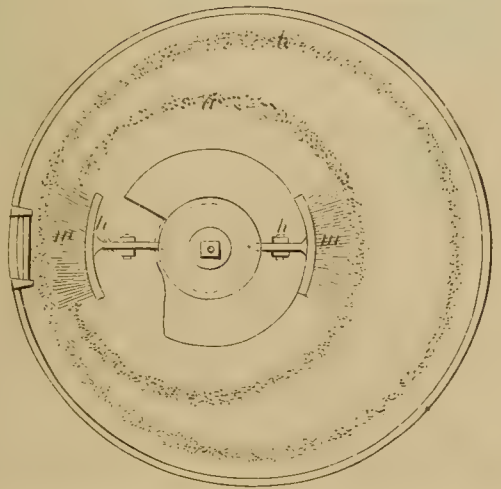

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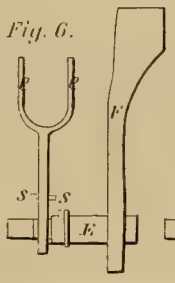

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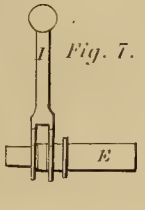

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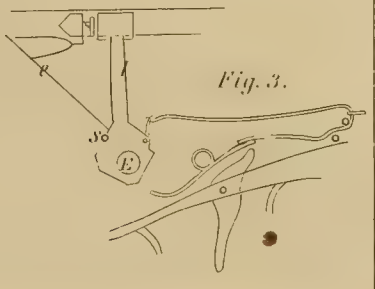

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Fig. 3.

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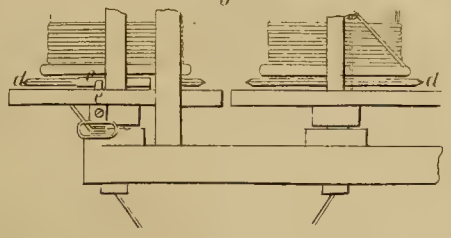

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Fig. 5.

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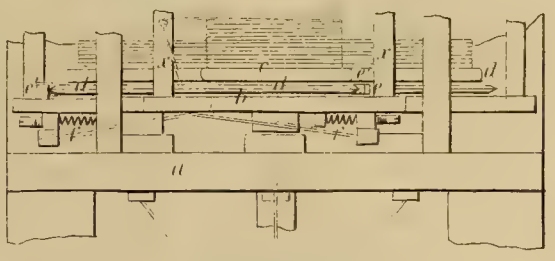

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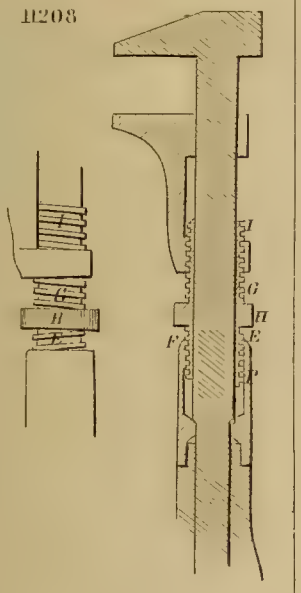

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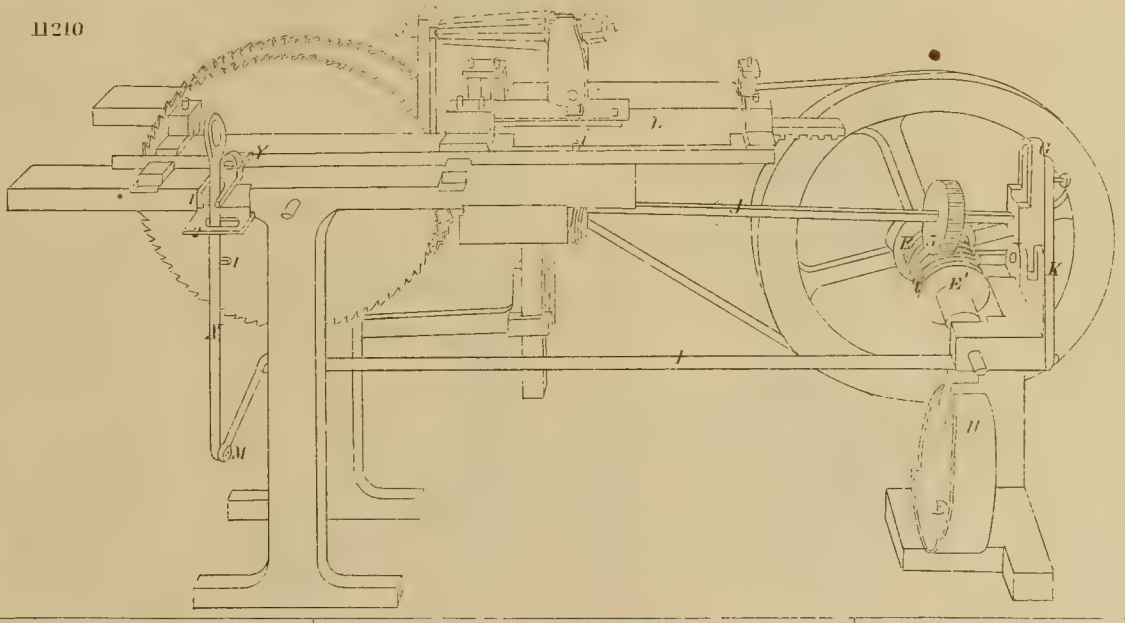

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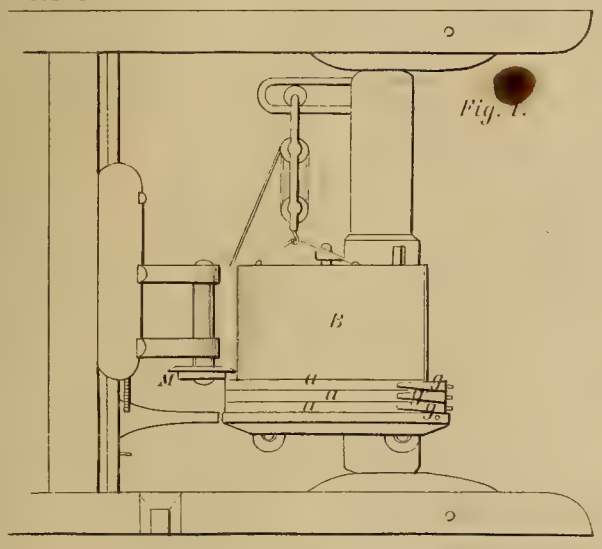

Fig. 1.

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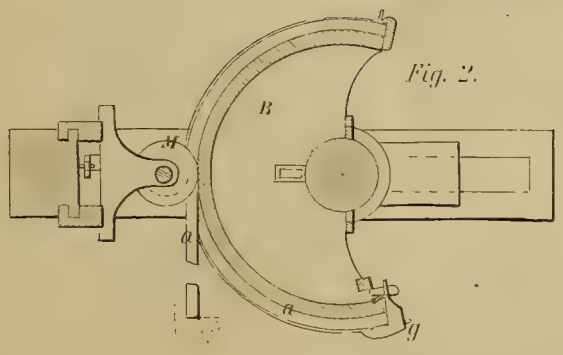

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Fig. 1.

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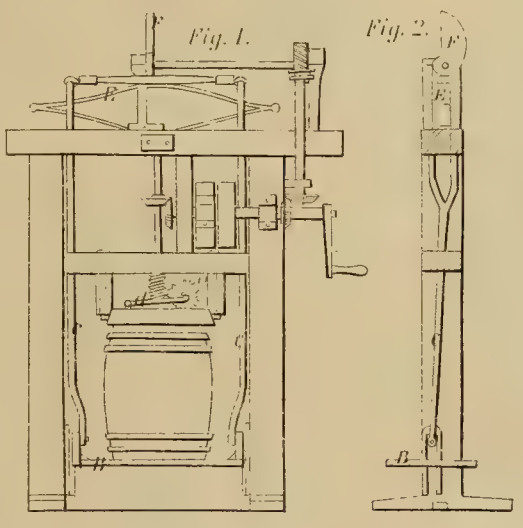

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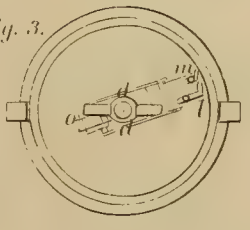

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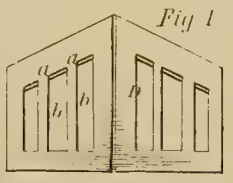

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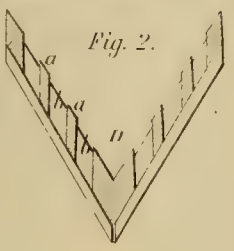

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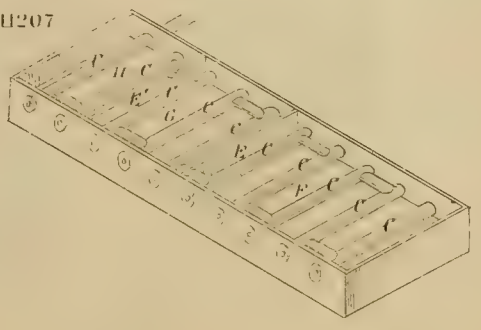

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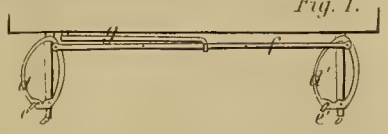

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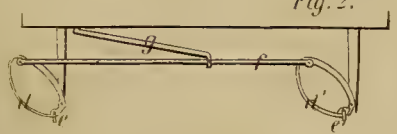

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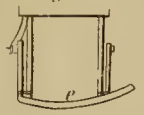

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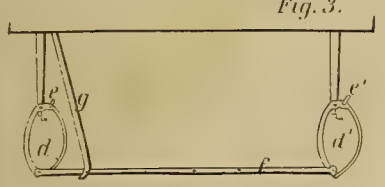

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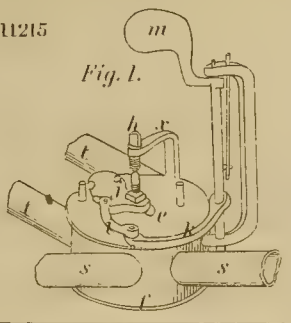

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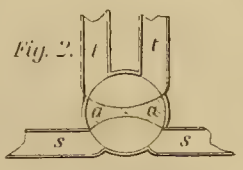

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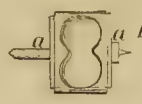

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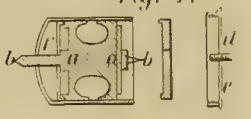

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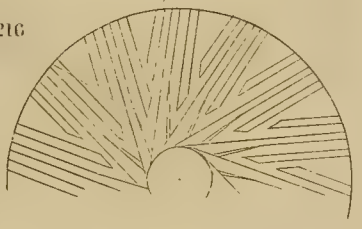

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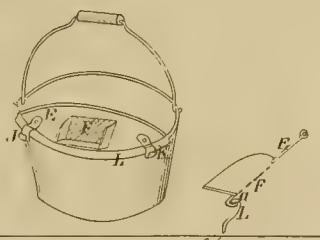

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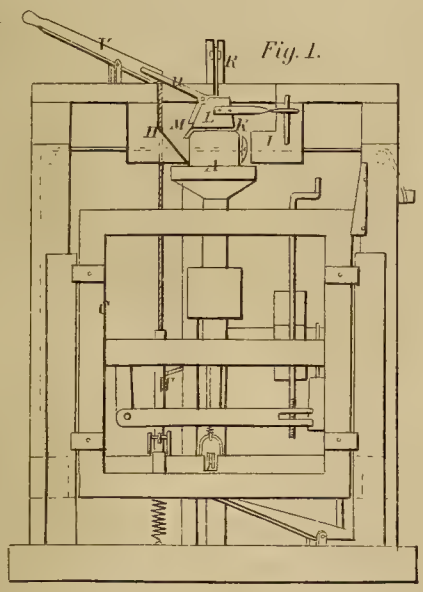

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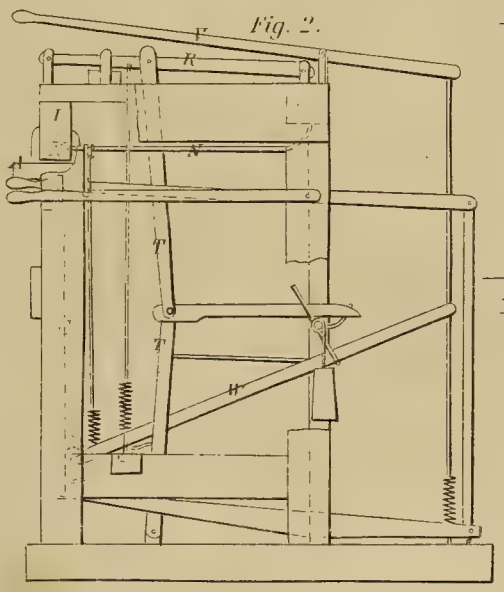

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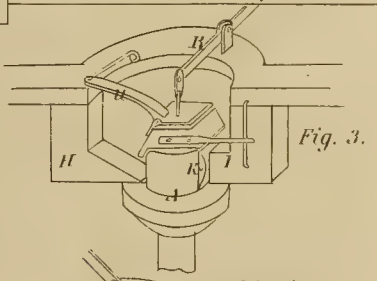

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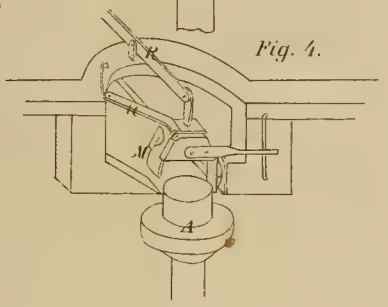

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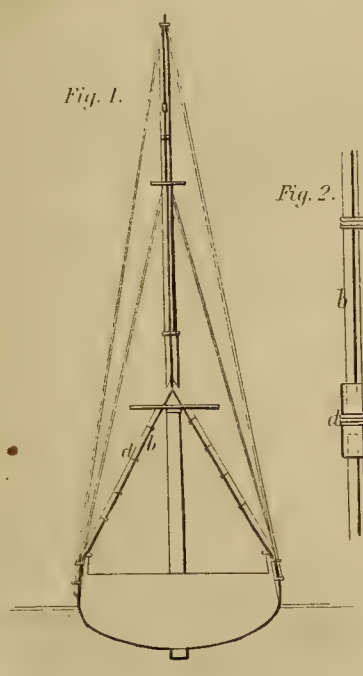

Fig. 2.

Fig. 3.

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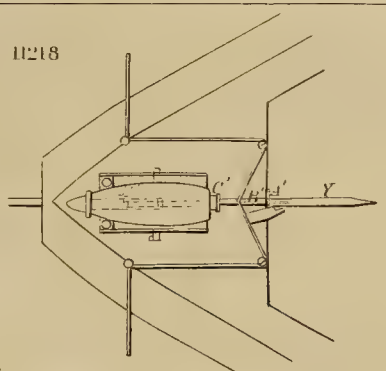

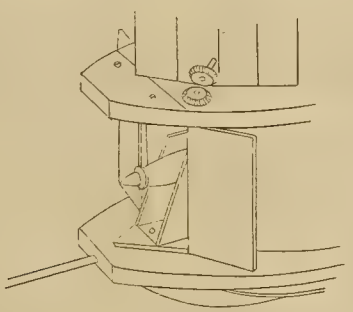

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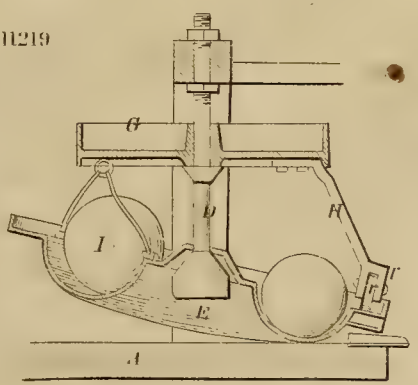

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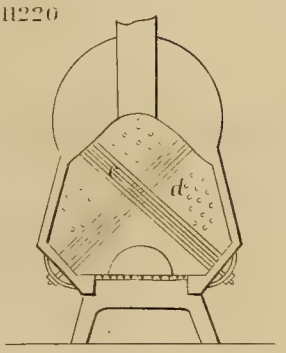

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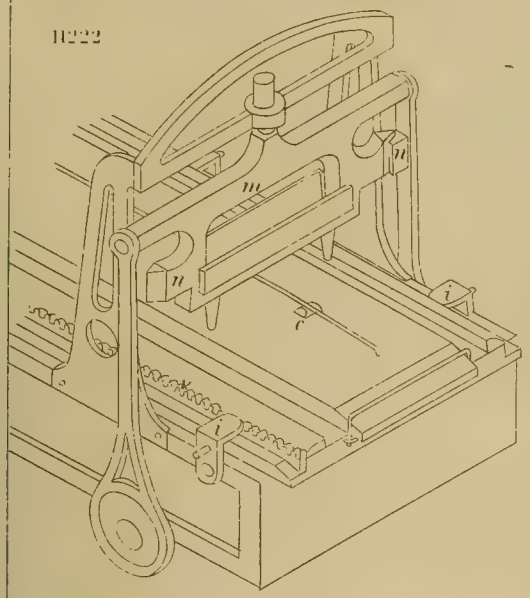

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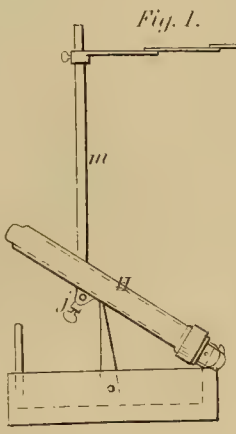

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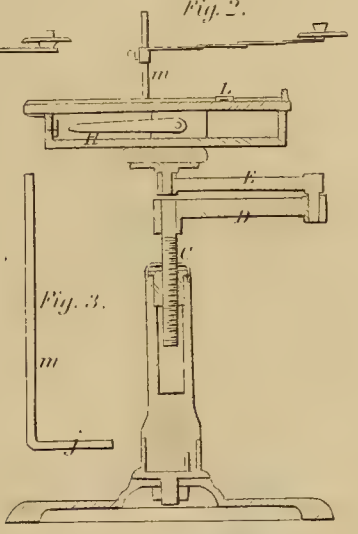
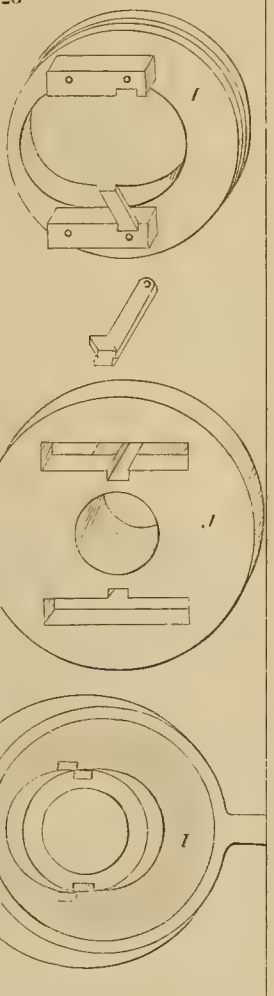


Fig. 3.

II223



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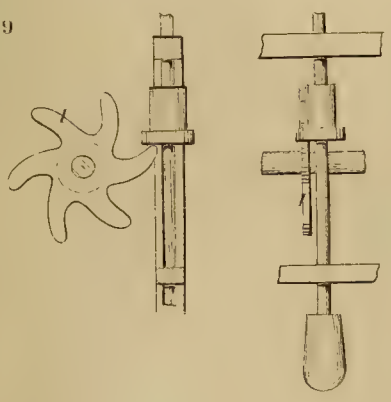

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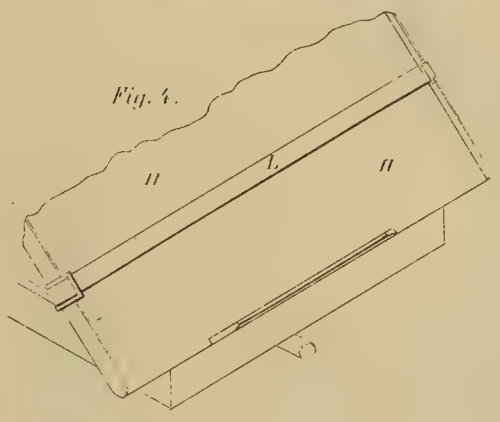

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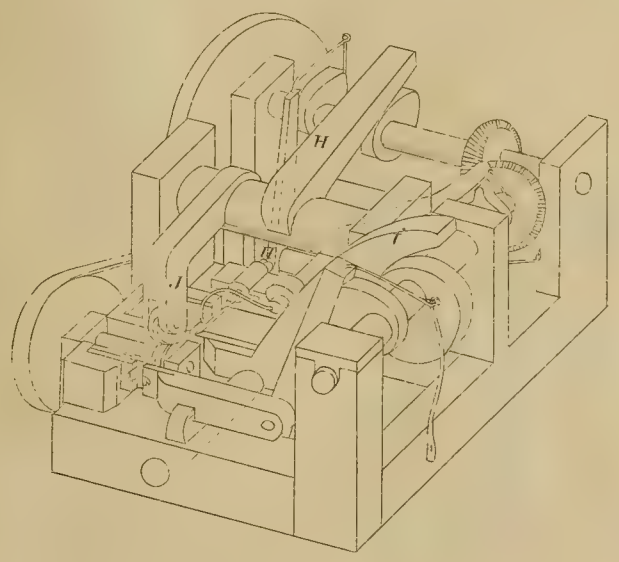

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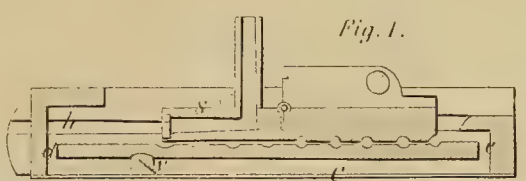

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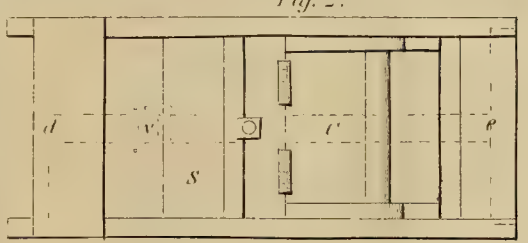

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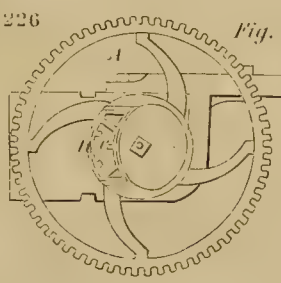

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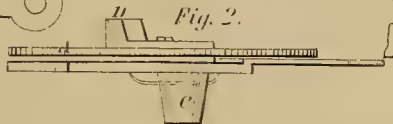

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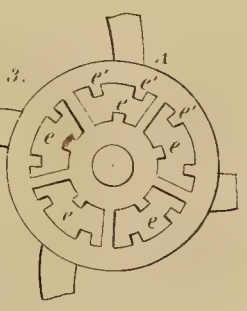

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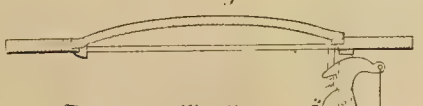

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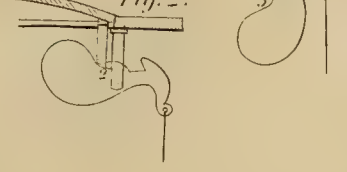

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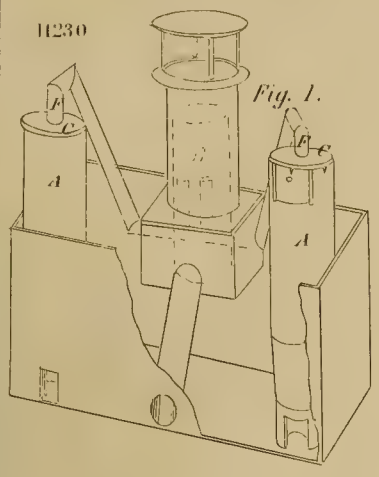

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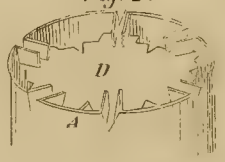

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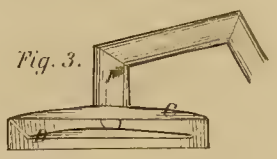

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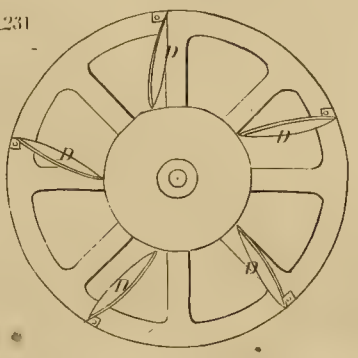

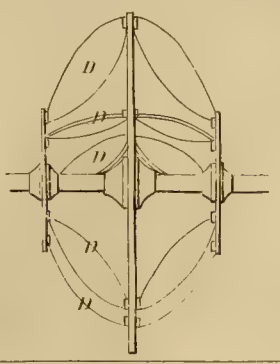

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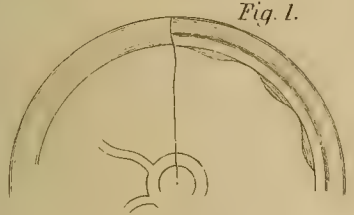

Fig. 2.

11238

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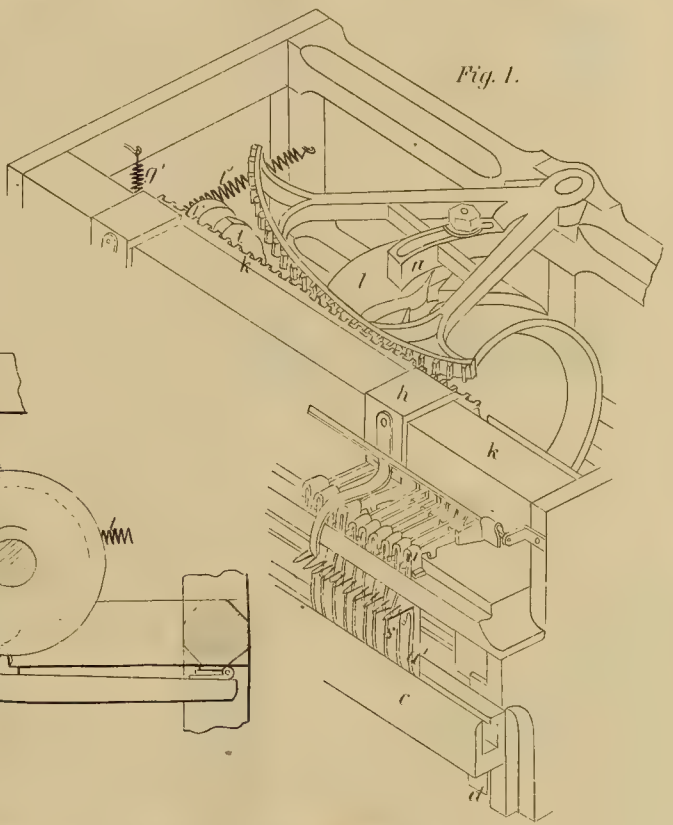

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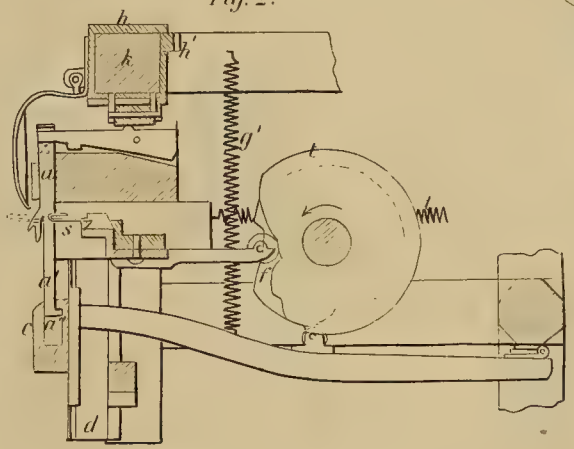

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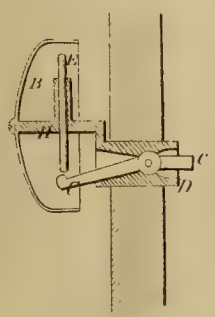

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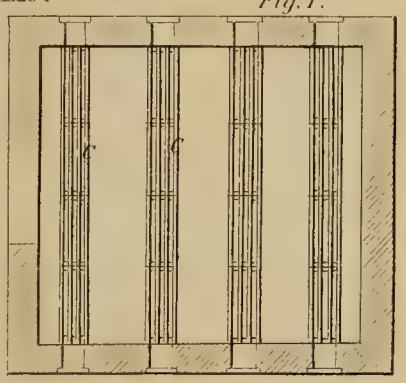

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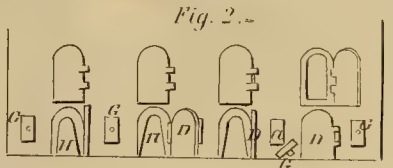

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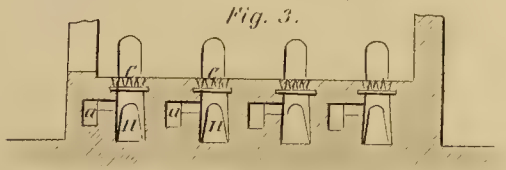

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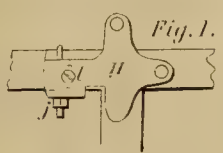

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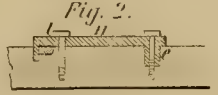

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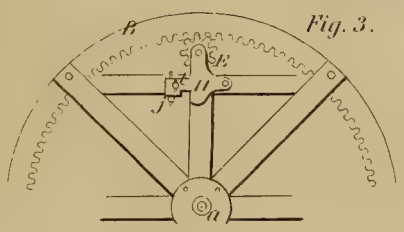

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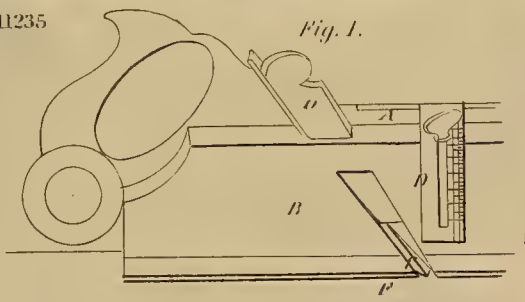

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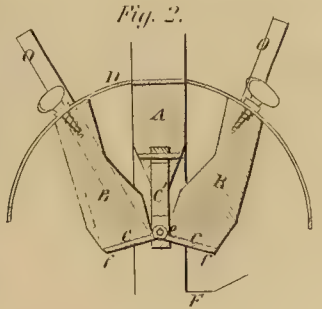

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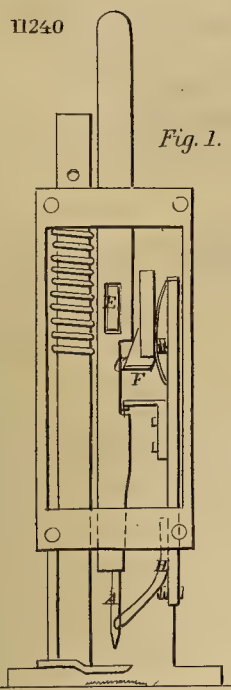

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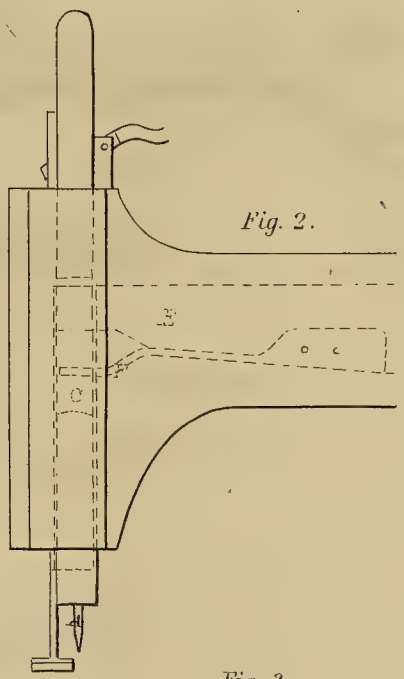

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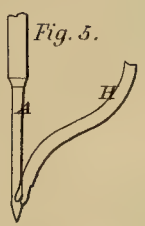

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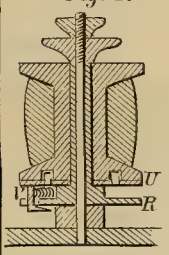

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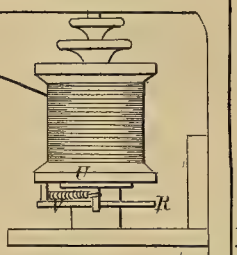

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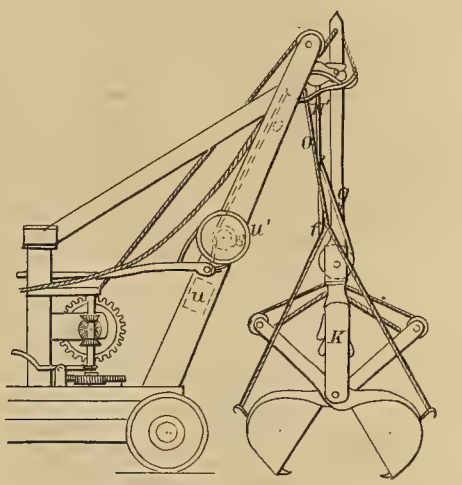

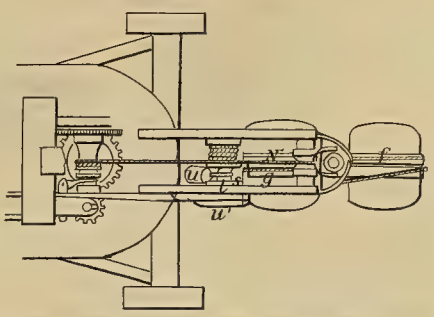

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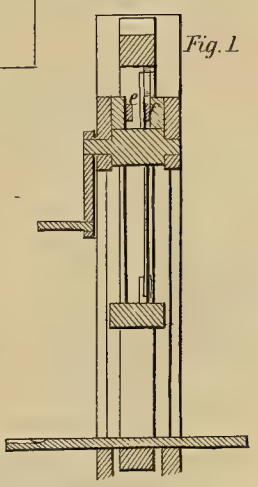

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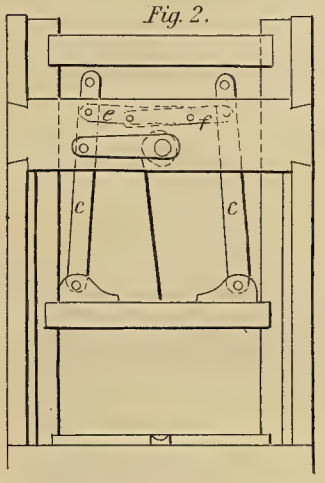

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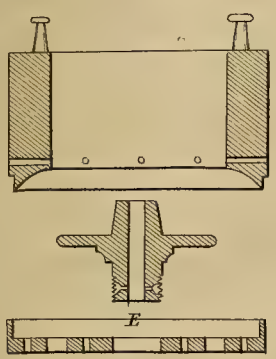

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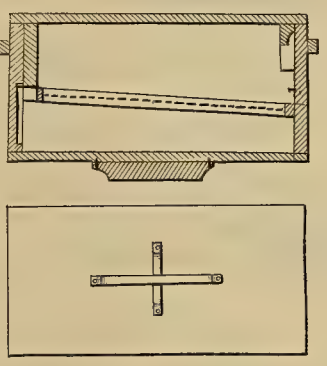

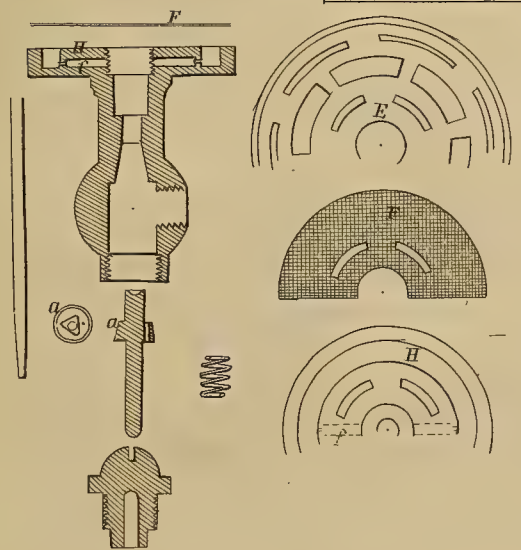

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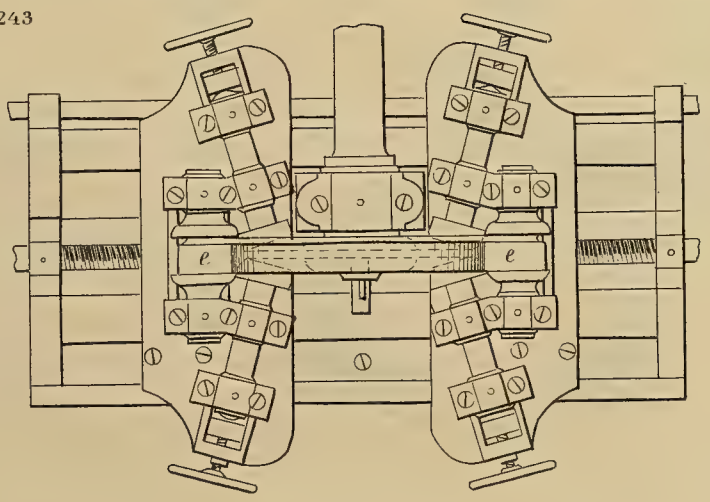

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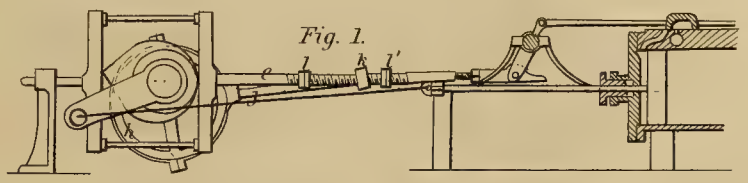

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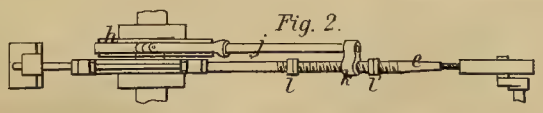

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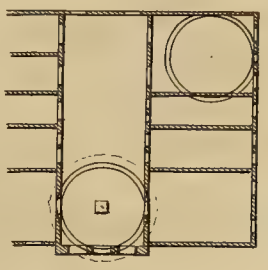

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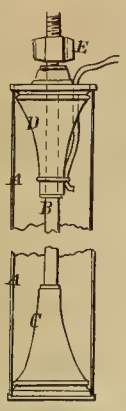

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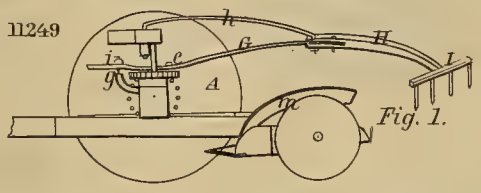

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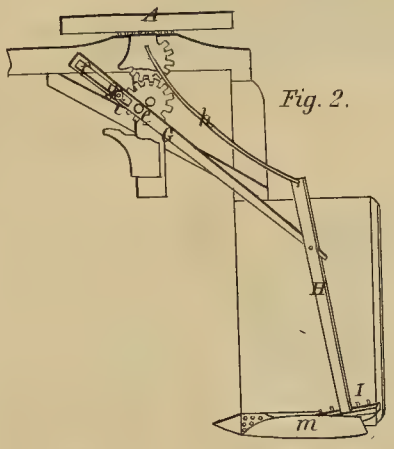
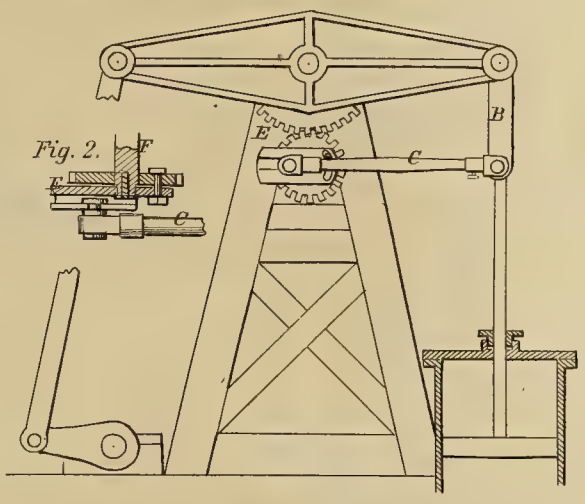


Fig. 2.

11252 Fig. 1.



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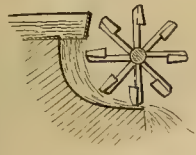

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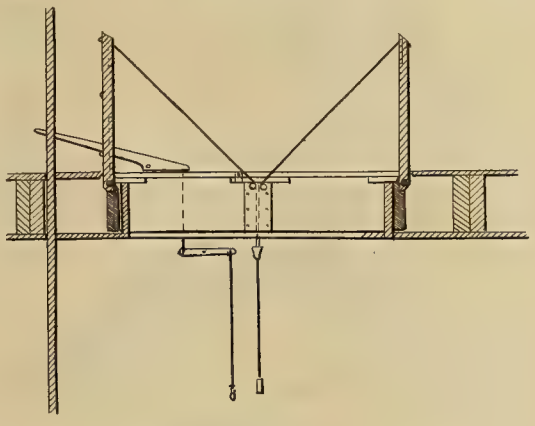

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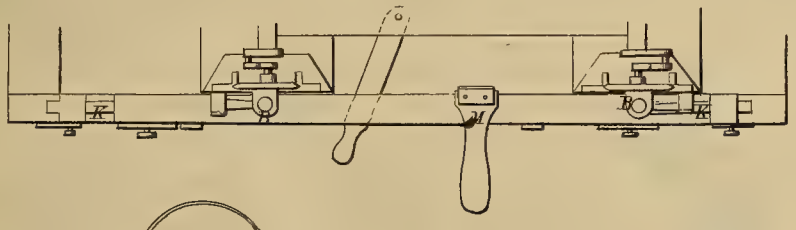

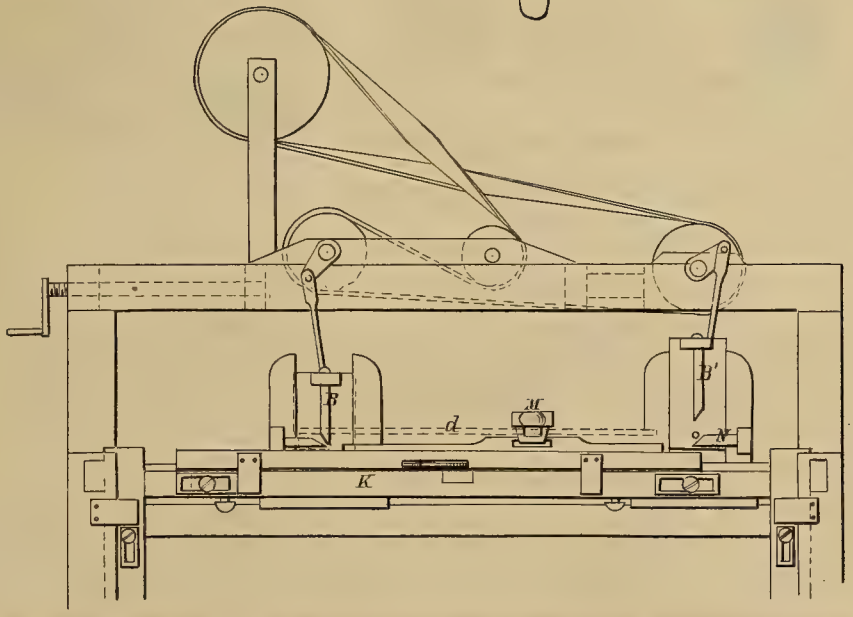

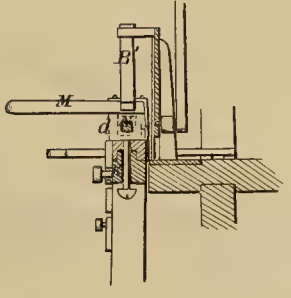

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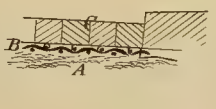

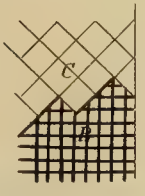

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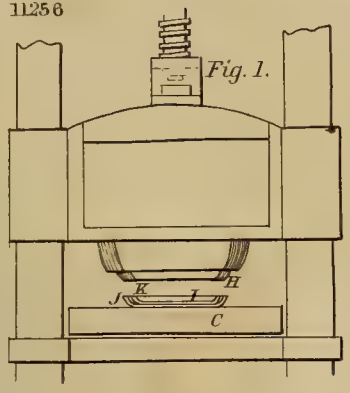

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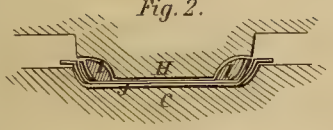

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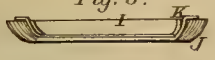

Fig. 3.

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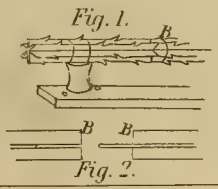
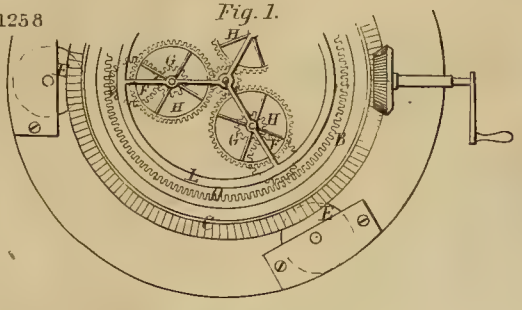


Fig. 1.

Fig. 2.

11258



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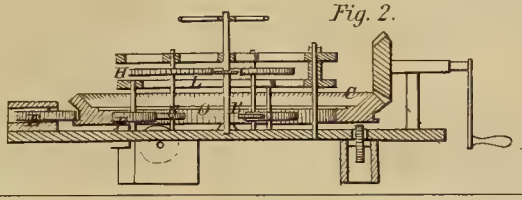

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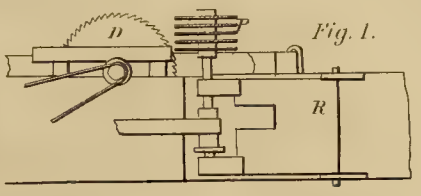

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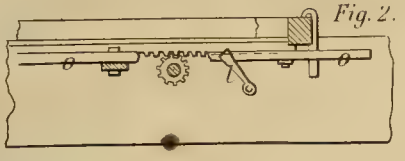

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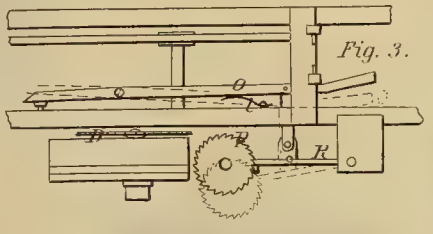

Fig. 3.

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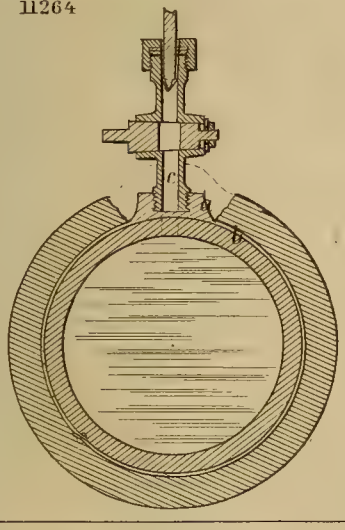

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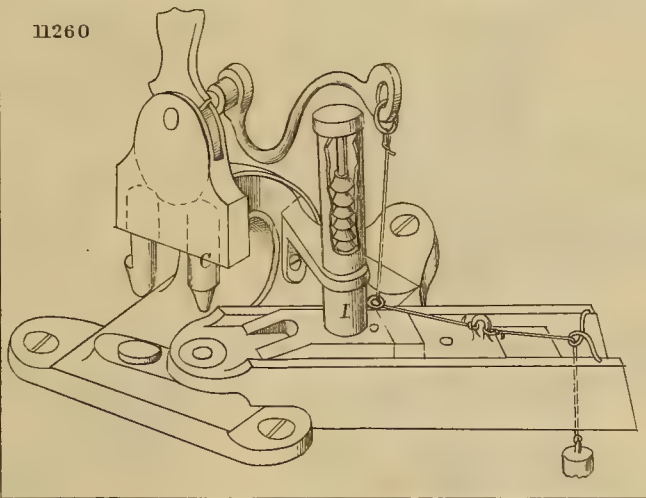

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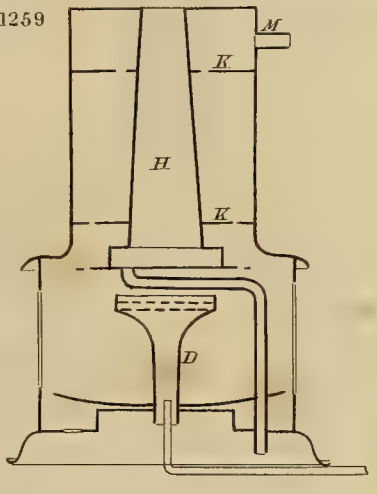

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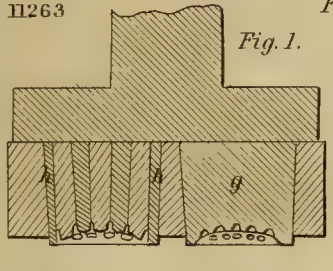


Fig. 1.

Fig. 2.

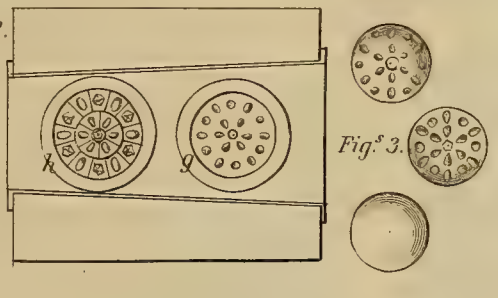
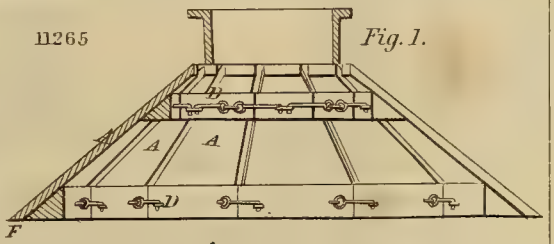


Fig.s 3.

11265



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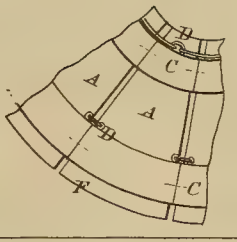

Fig. 2.

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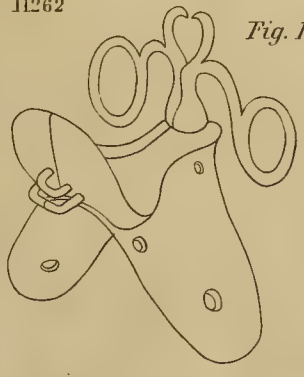

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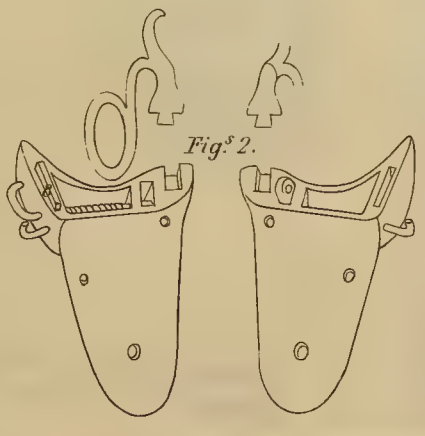

Fig.s 2.

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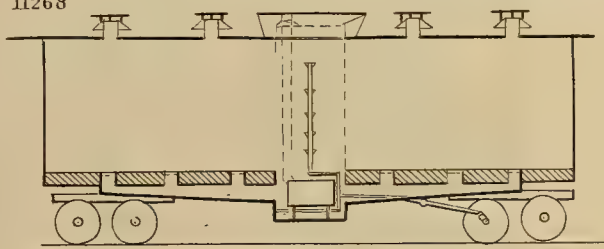

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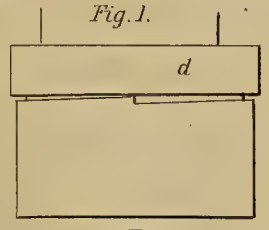

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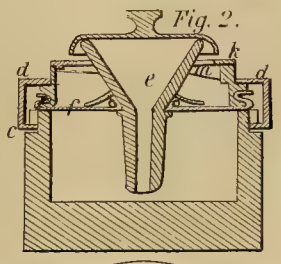

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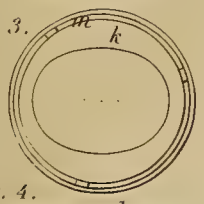

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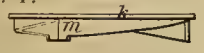

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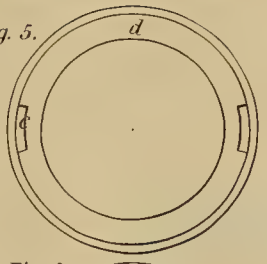

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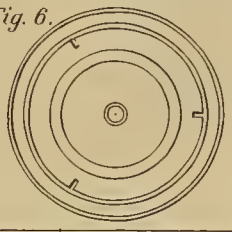

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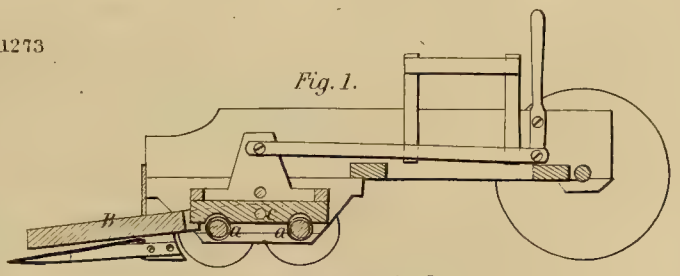

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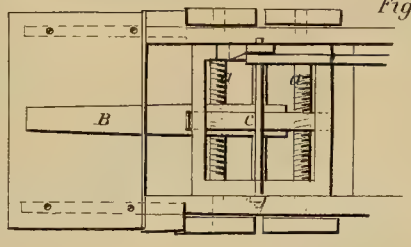

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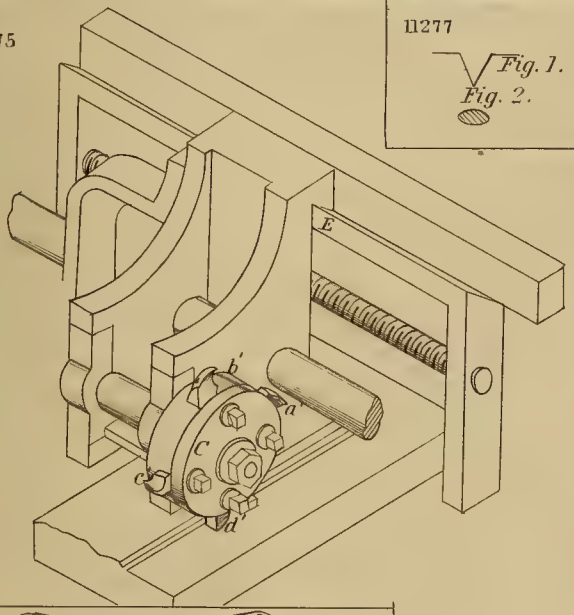

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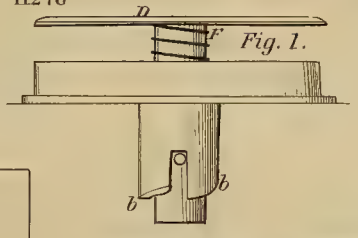

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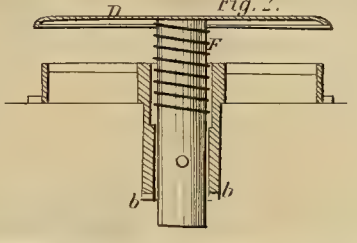

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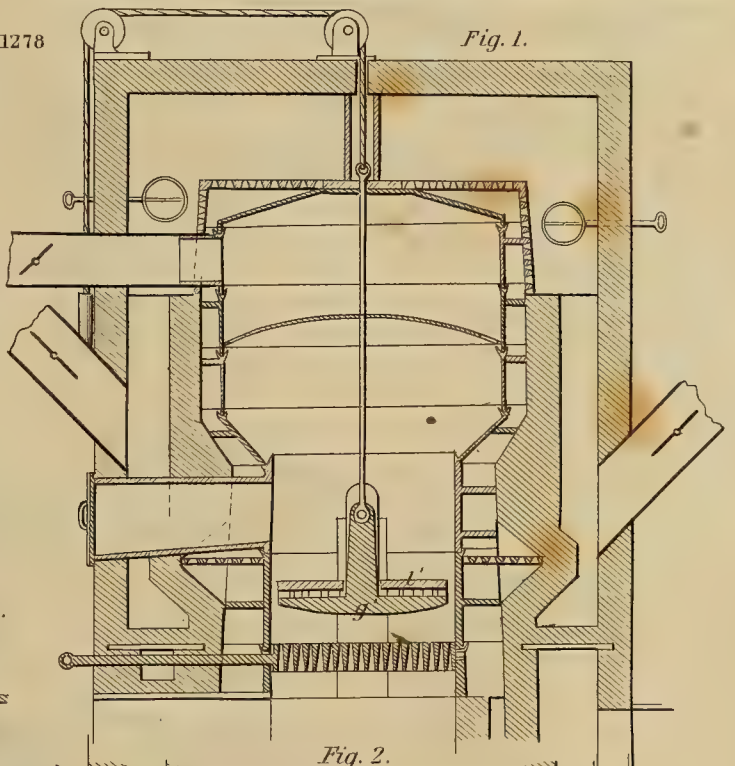

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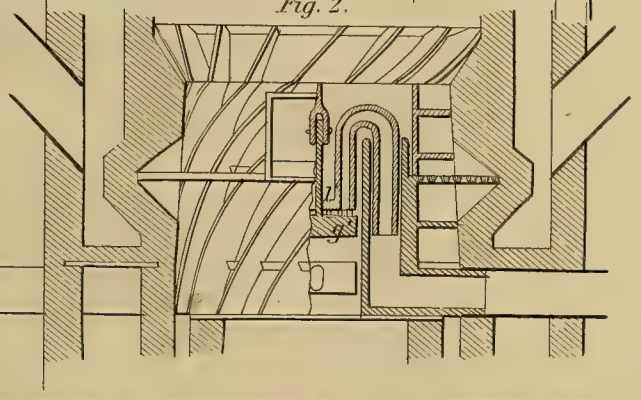

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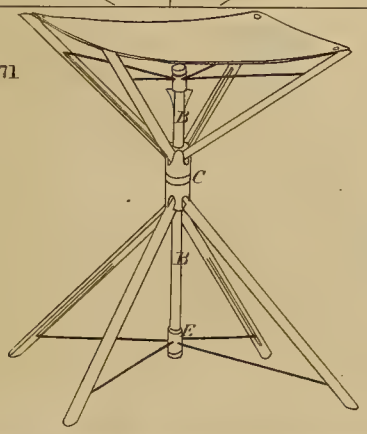

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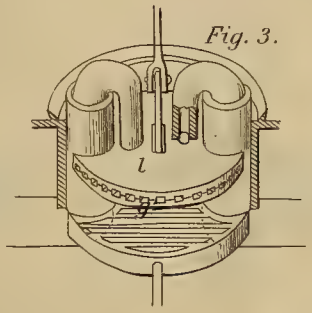

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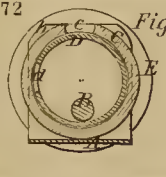

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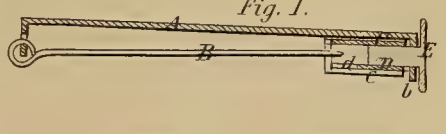

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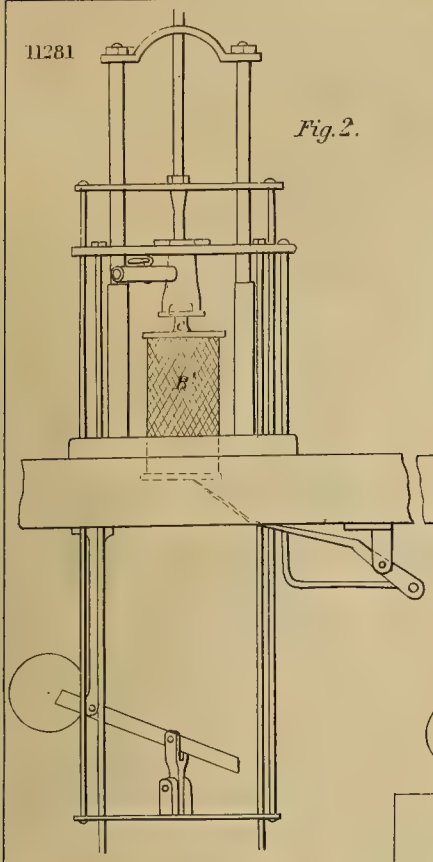

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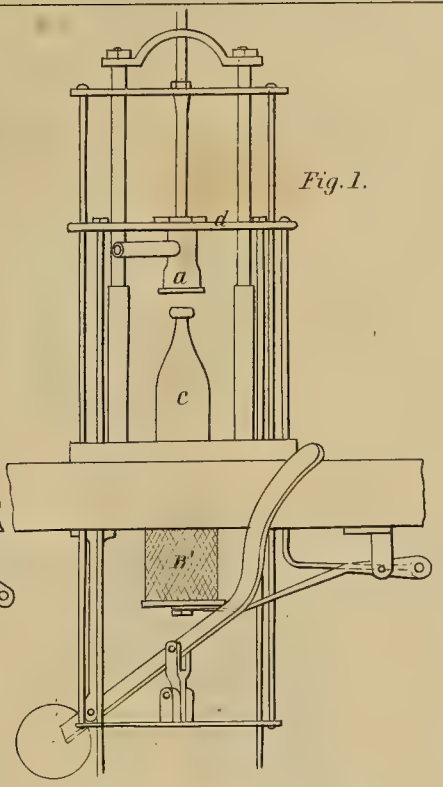

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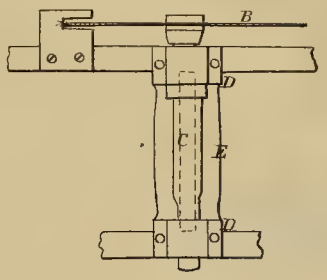

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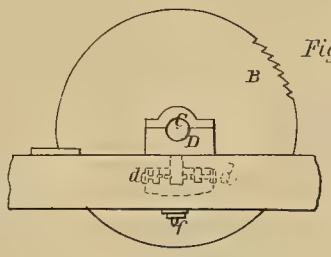

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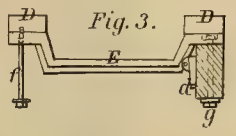

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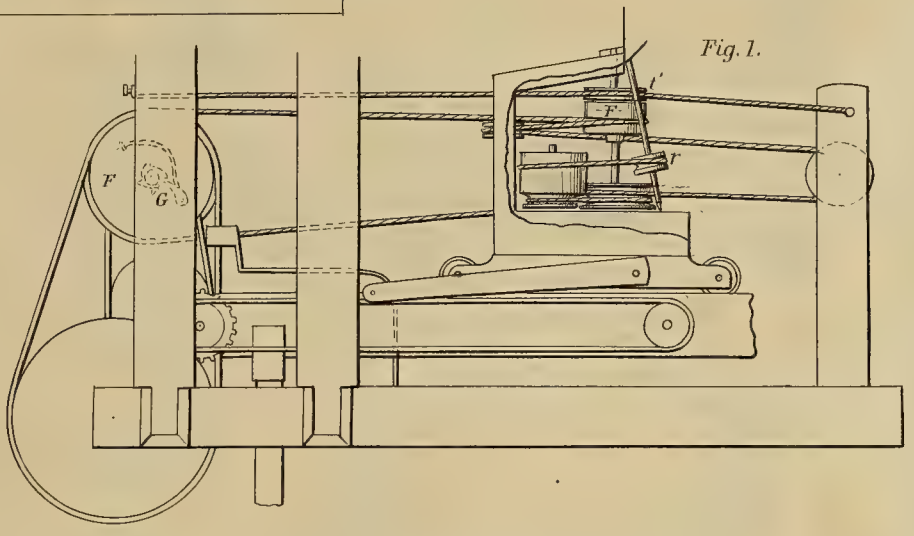

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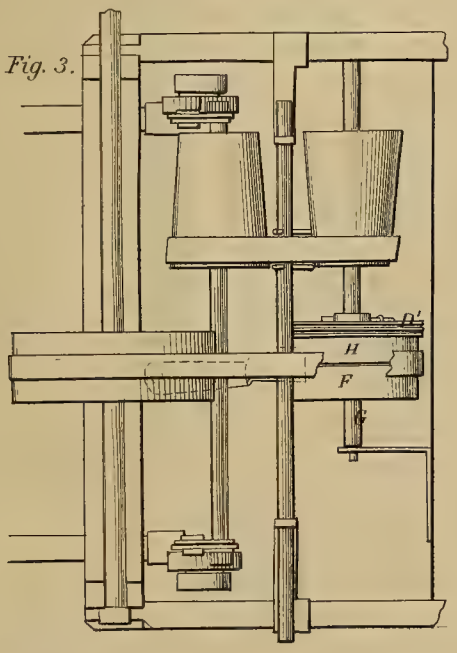

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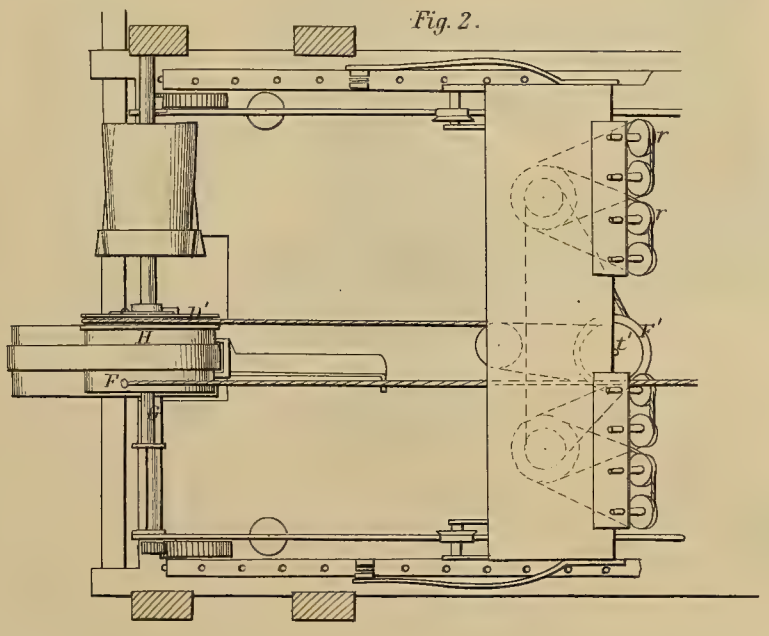

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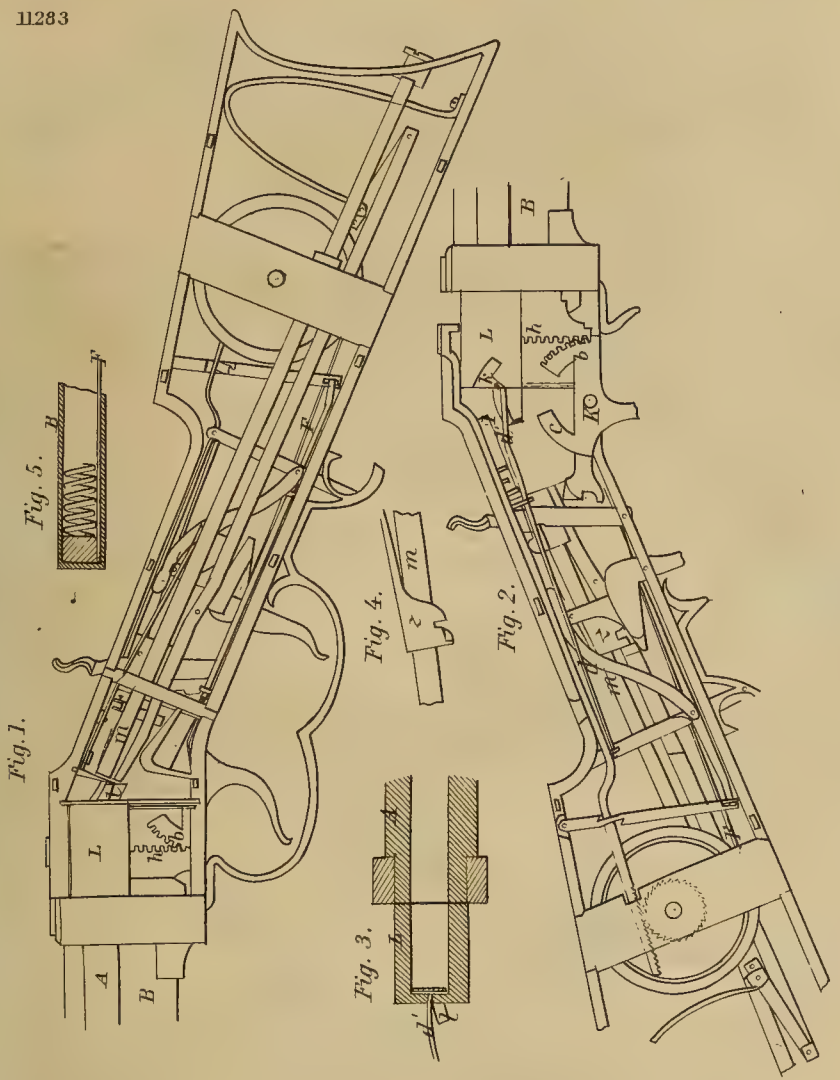

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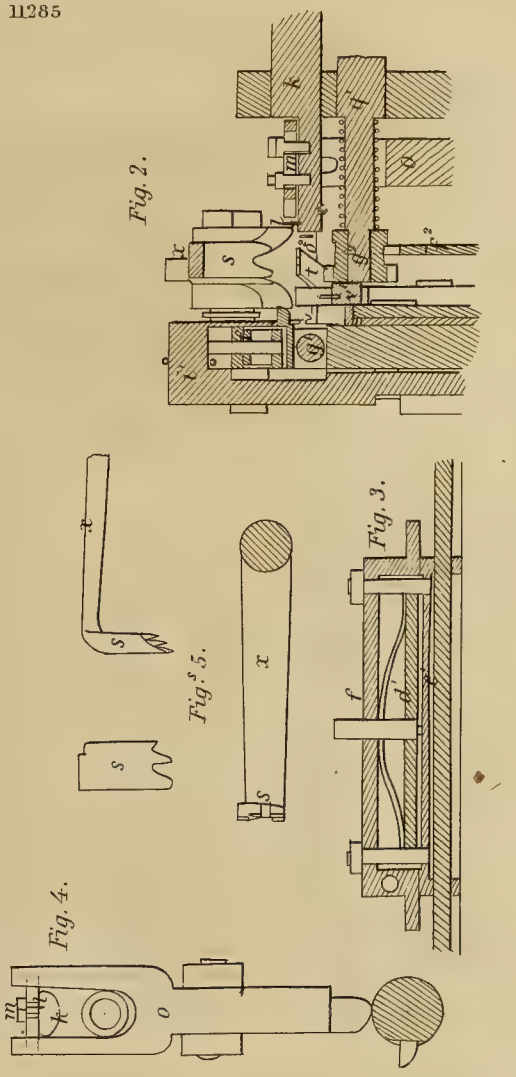

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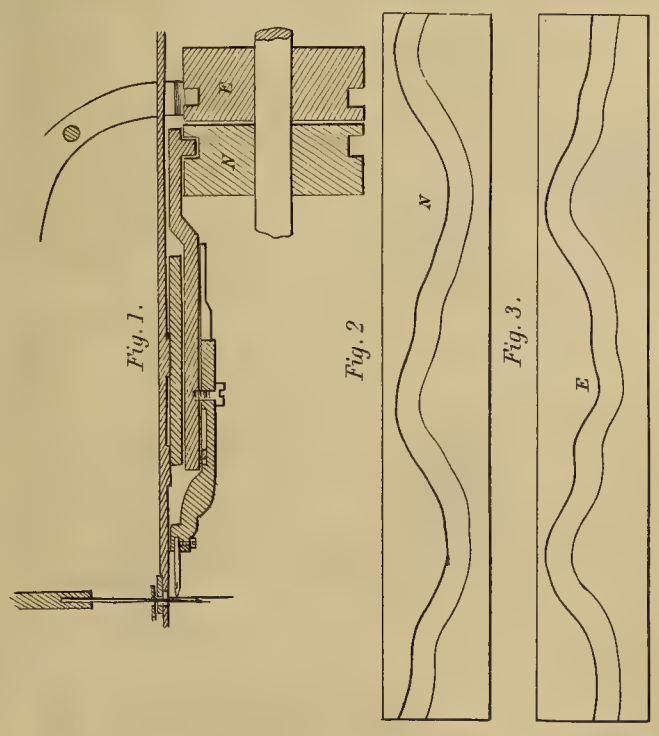

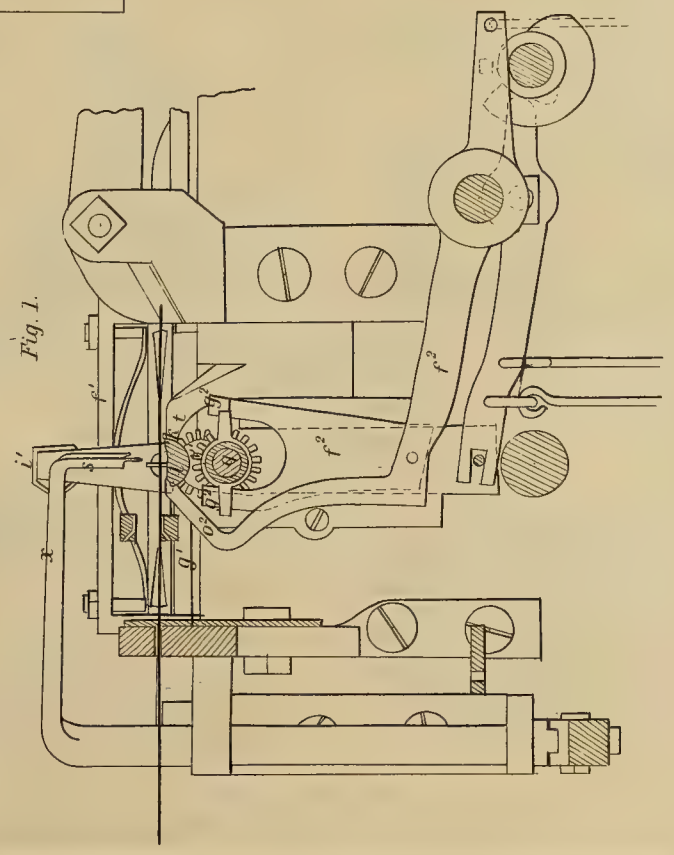

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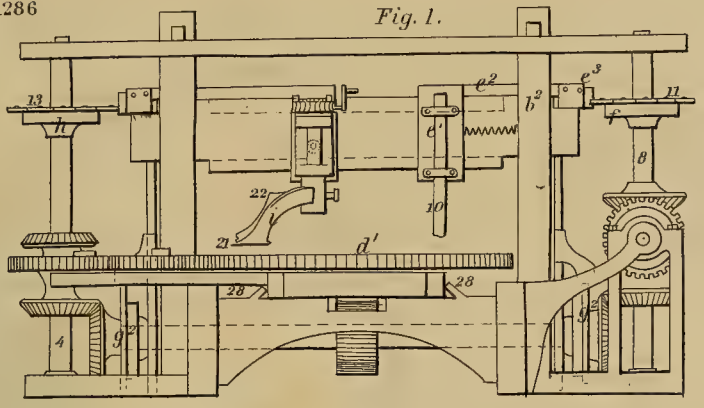

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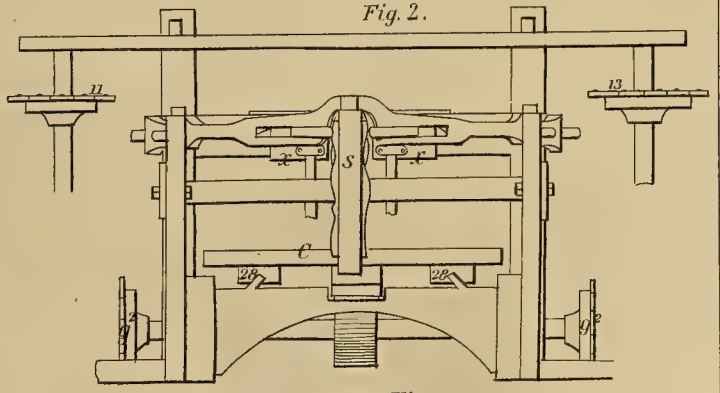

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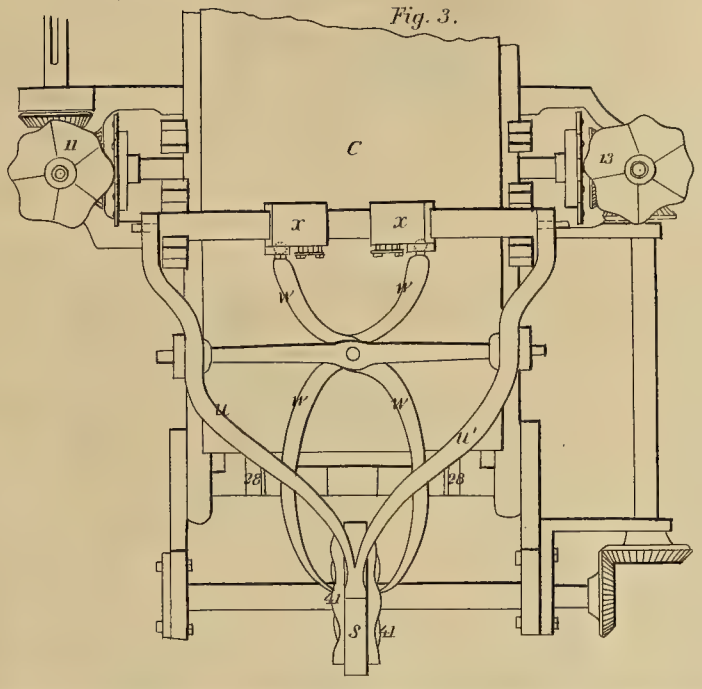

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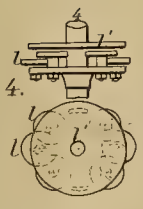

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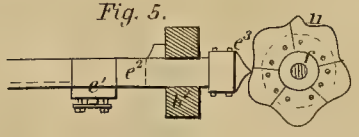
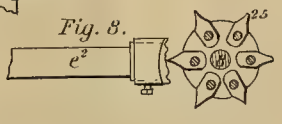


Fig. 6.

Fig. 7.

Fig. 8.



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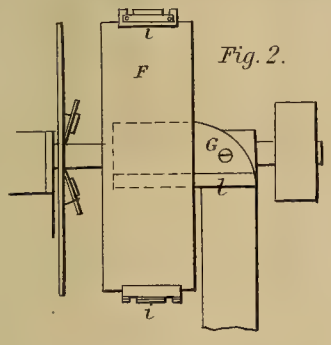

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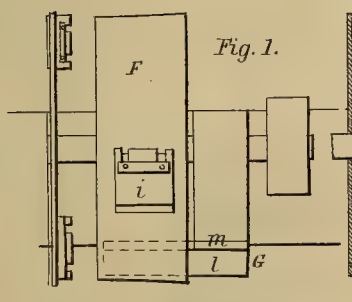

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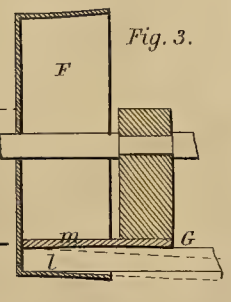

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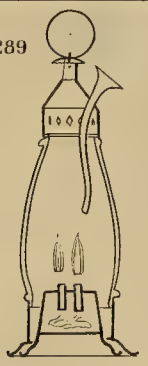

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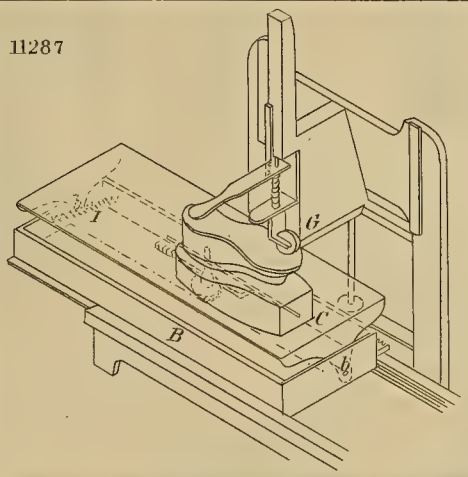

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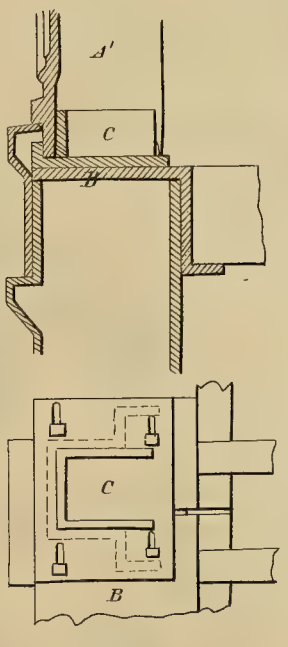

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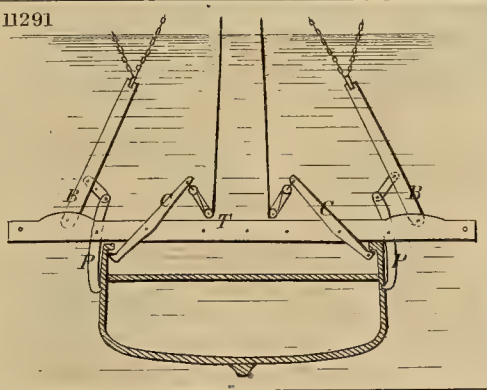

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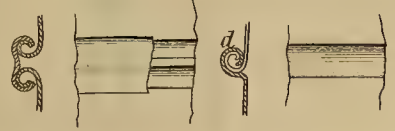

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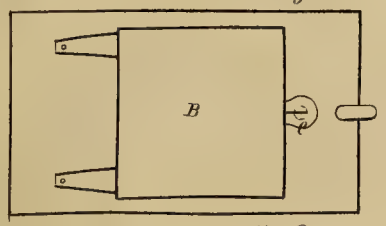

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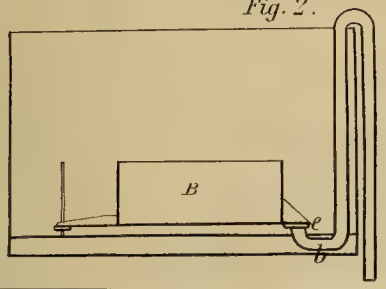

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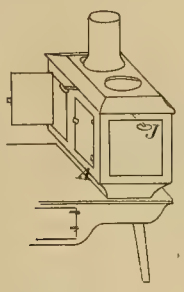

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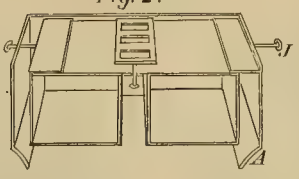

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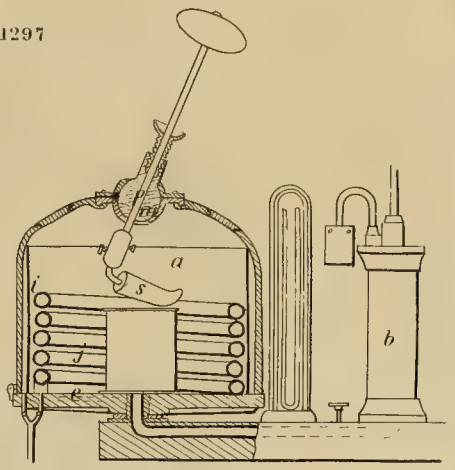

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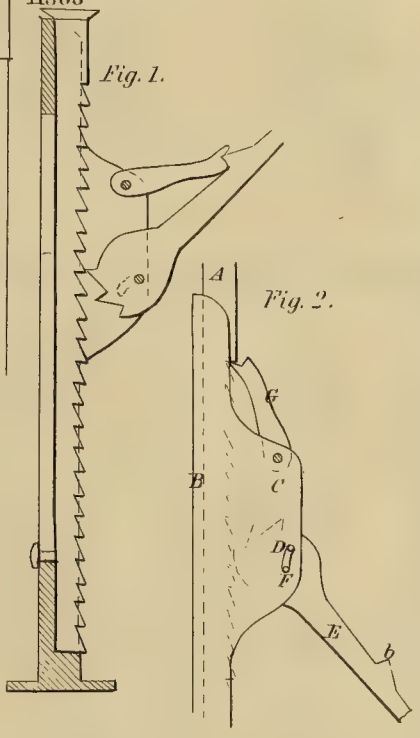

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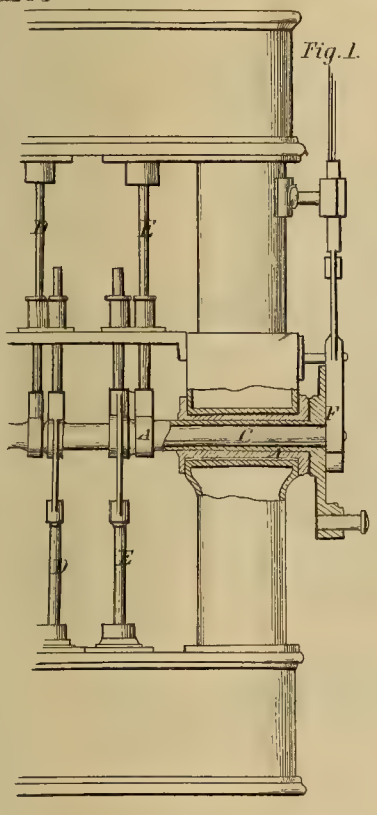

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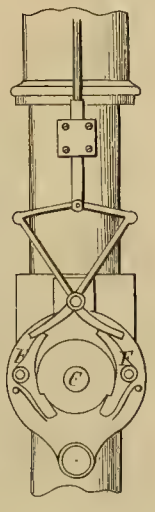

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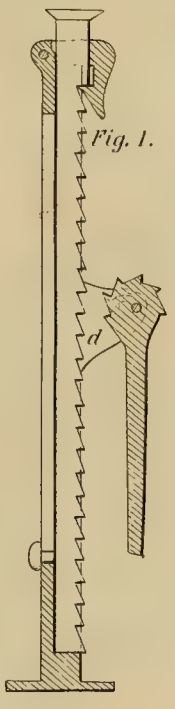

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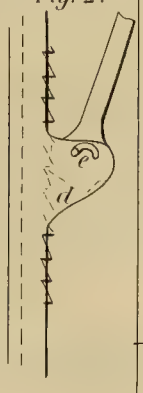

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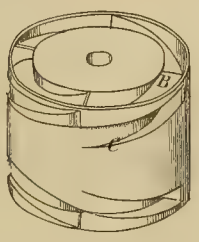

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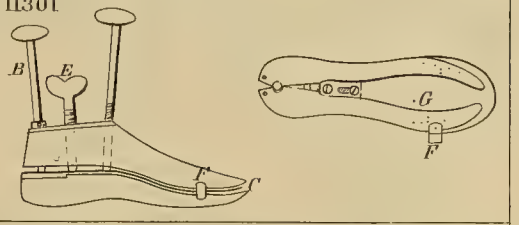

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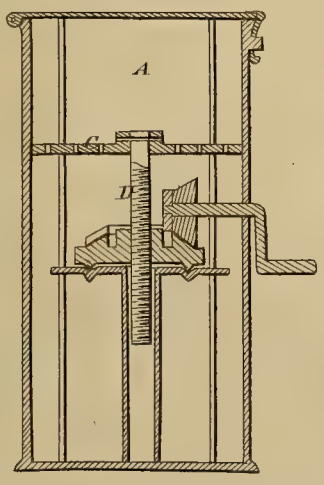

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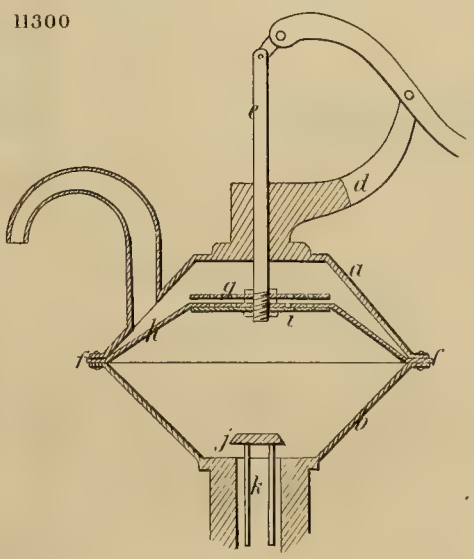

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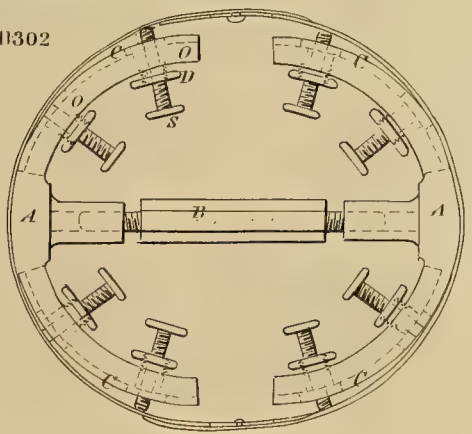

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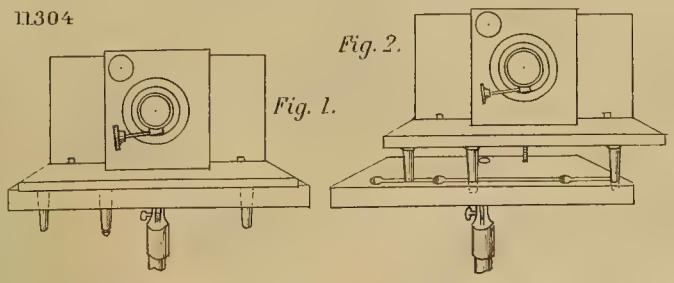

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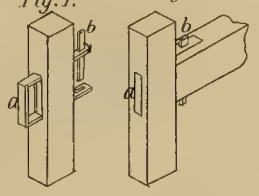

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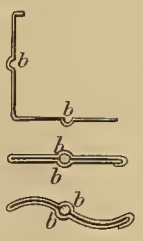

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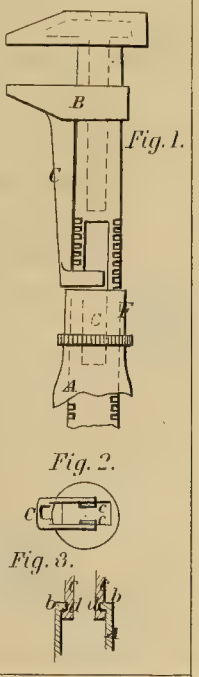

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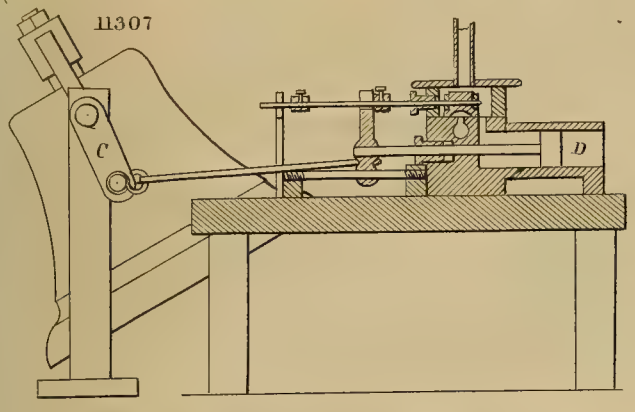

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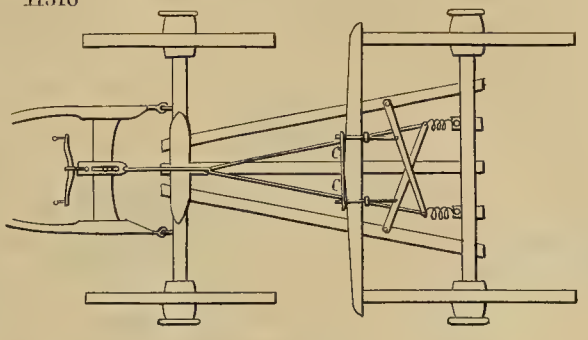

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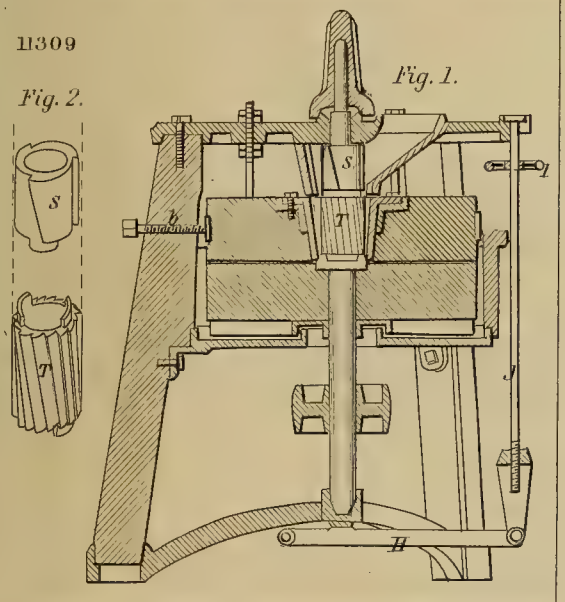

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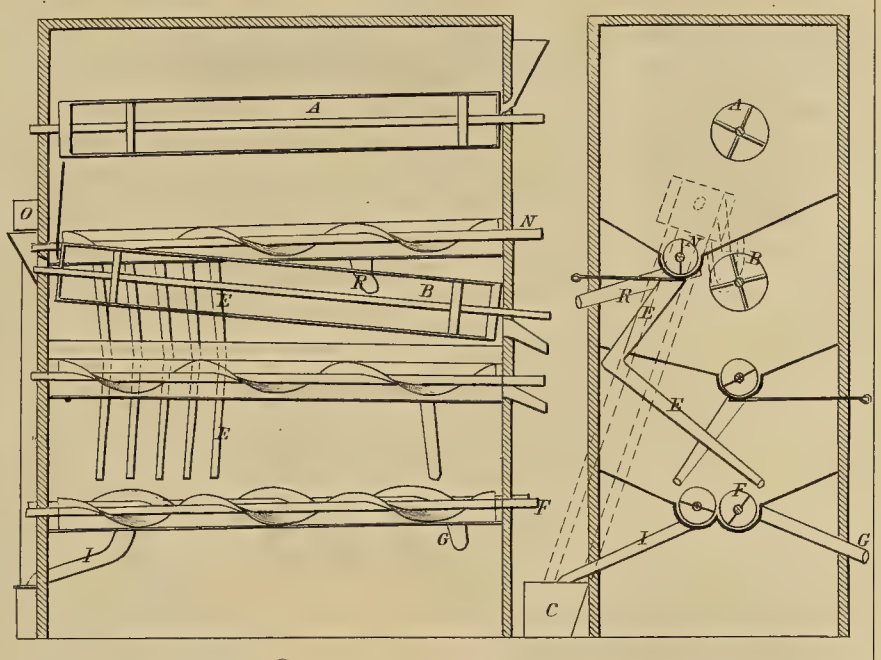

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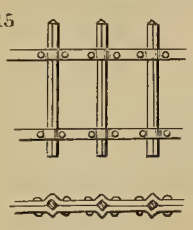

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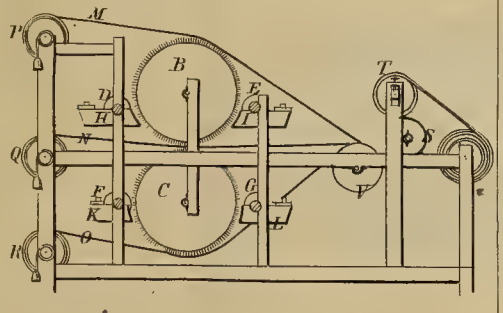

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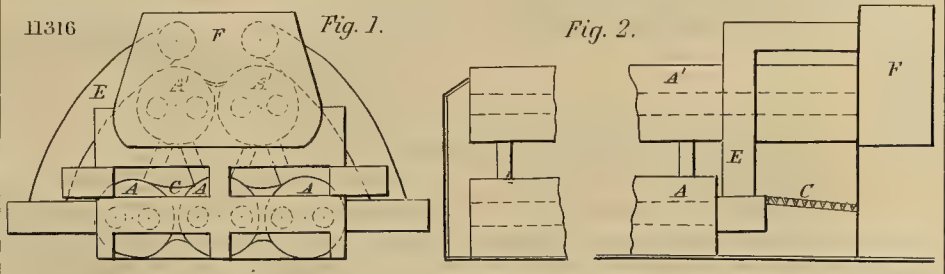

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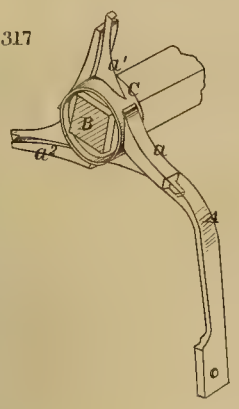

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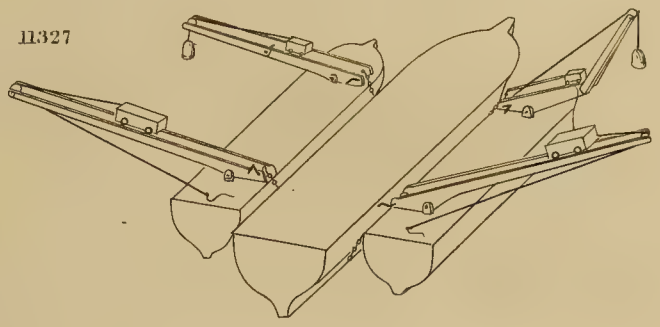

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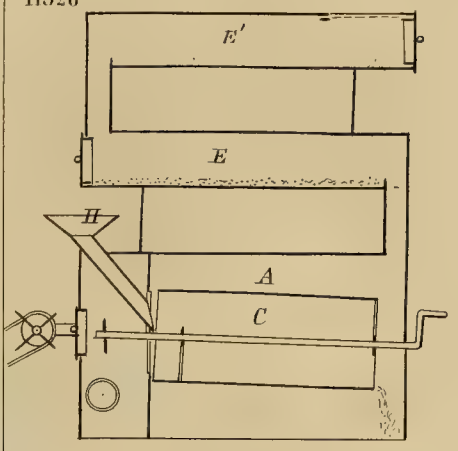

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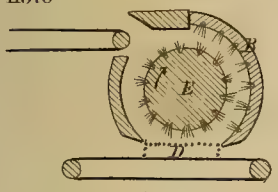

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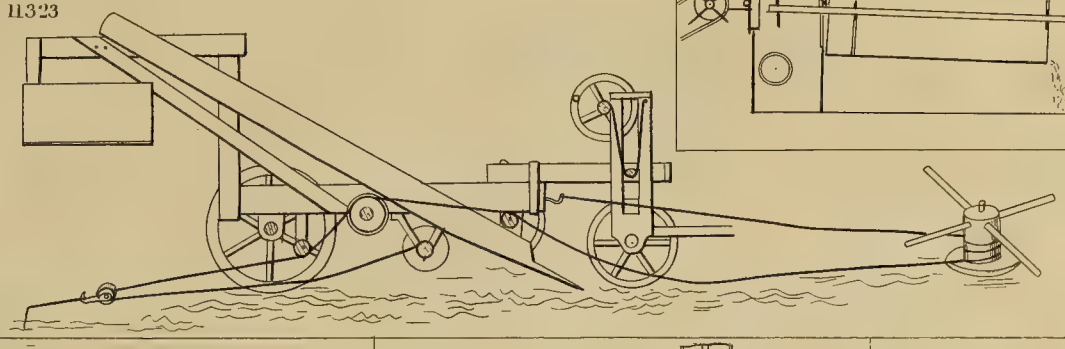

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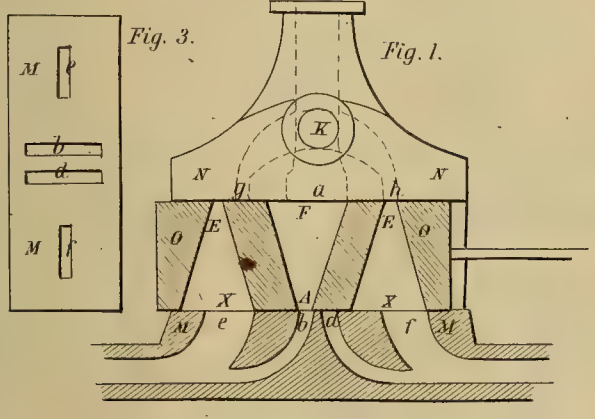

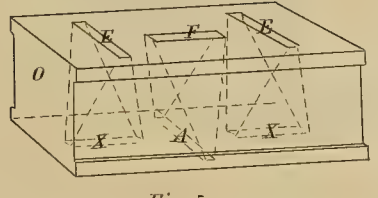

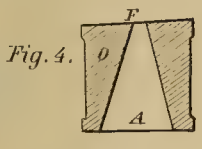

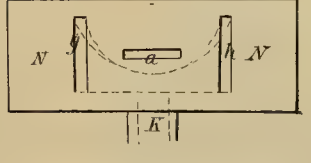

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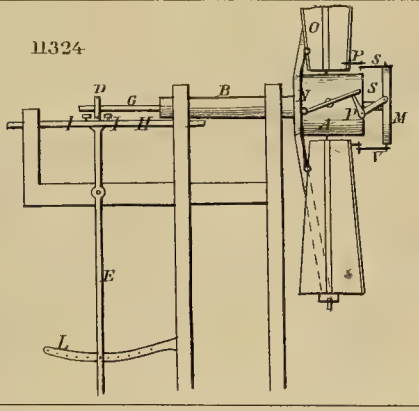

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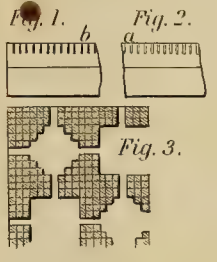

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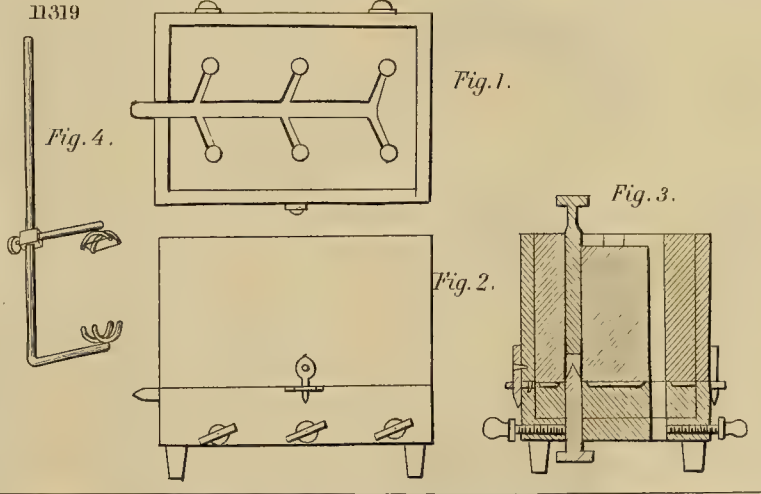

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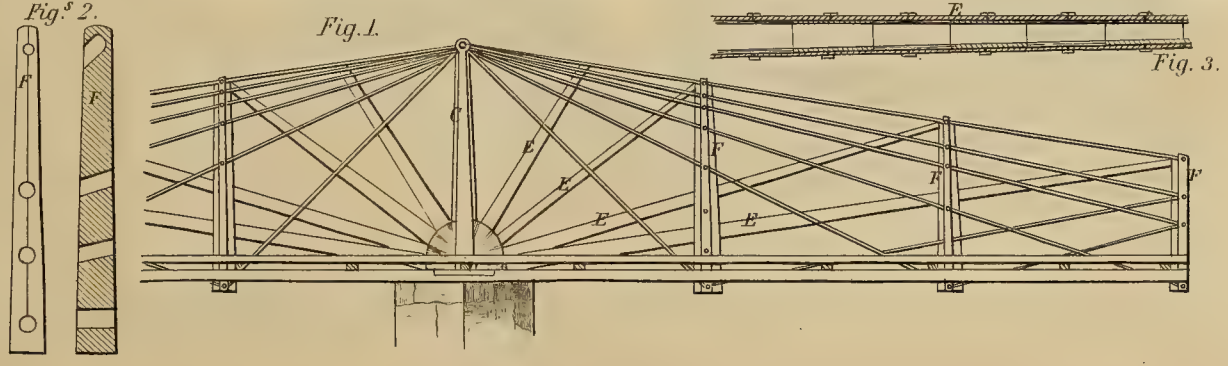

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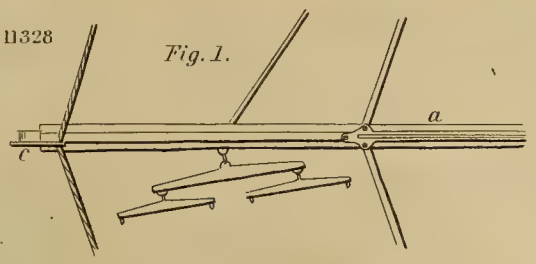

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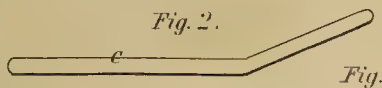

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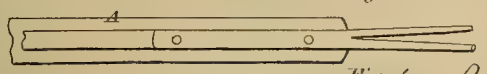

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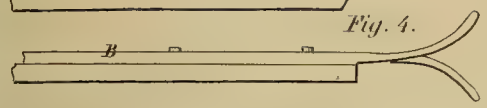

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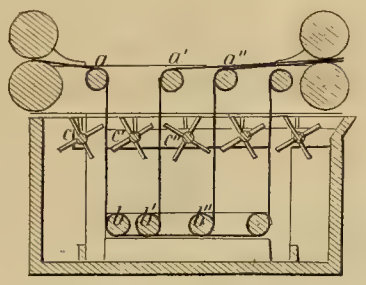

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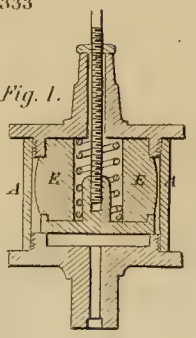

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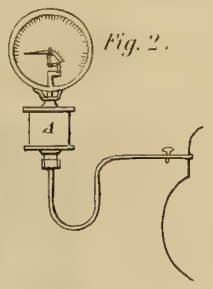

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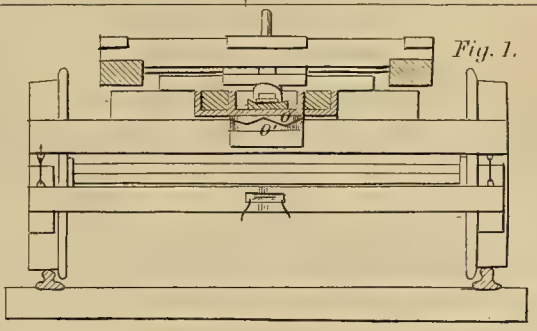

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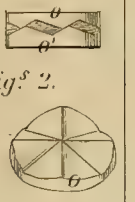

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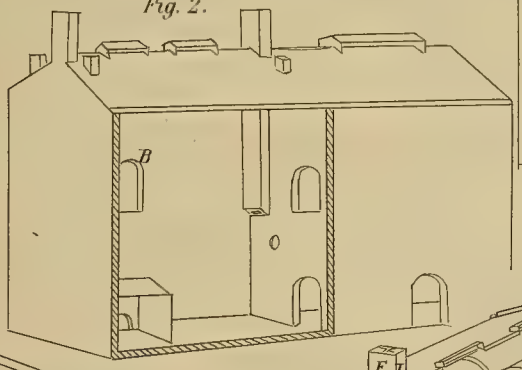

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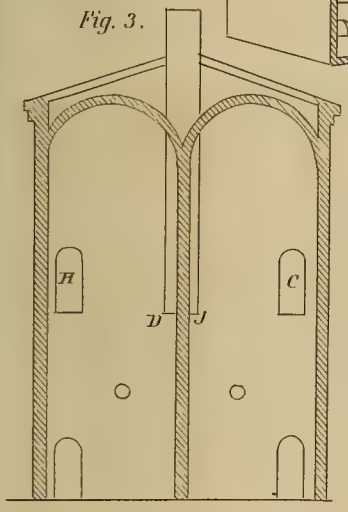

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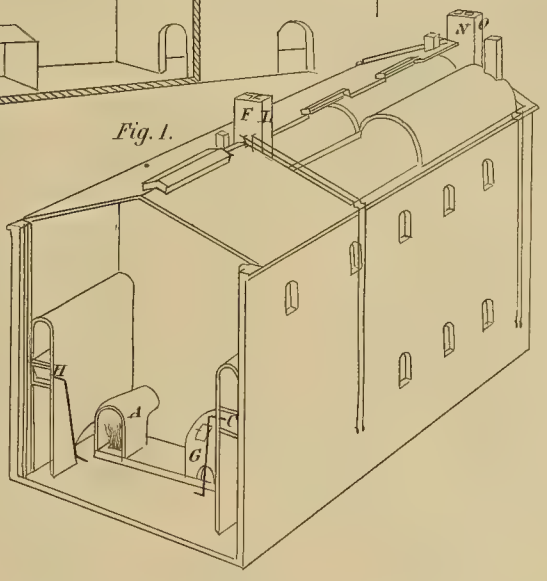

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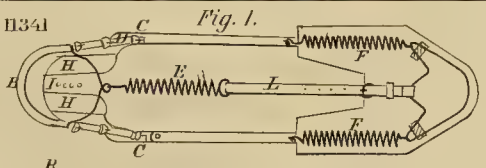

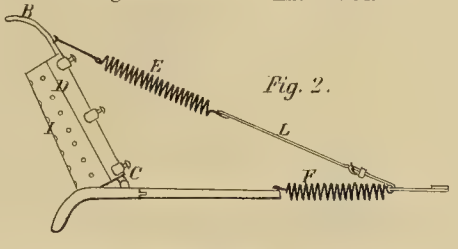

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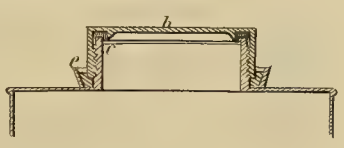

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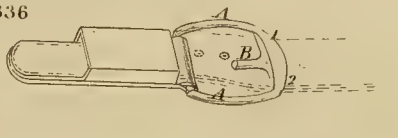

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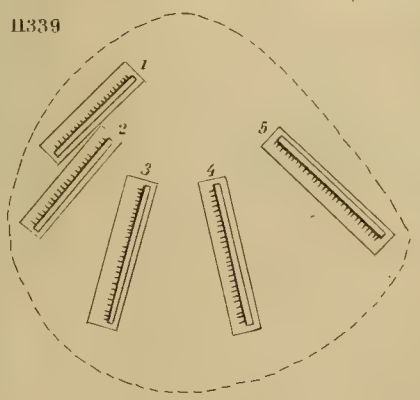

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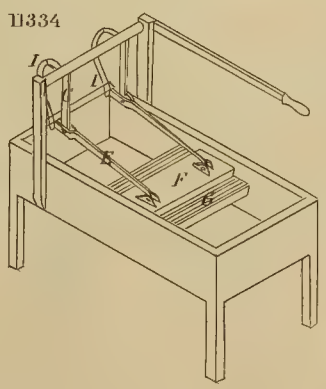

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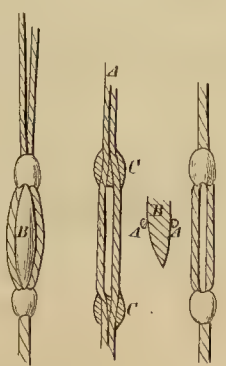

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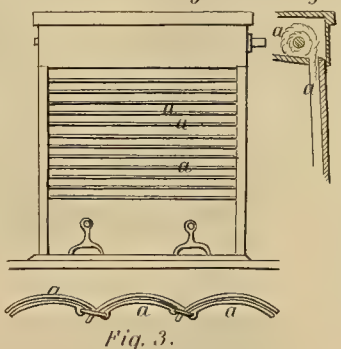

Fig. 3.

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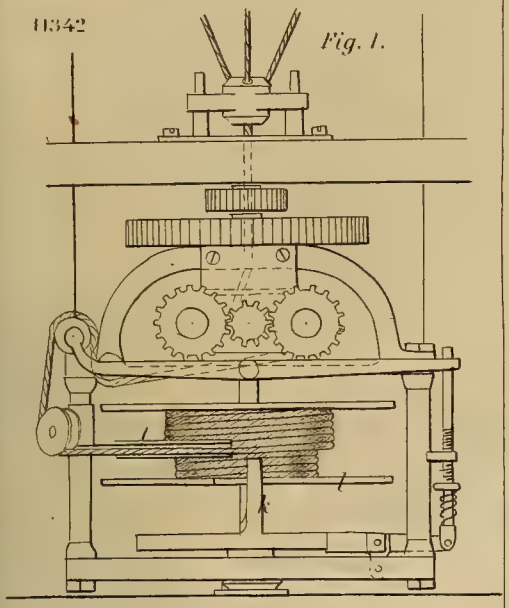

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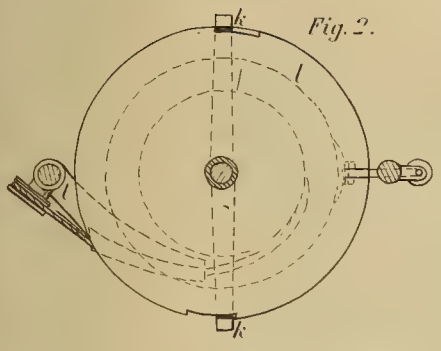

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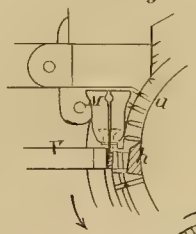

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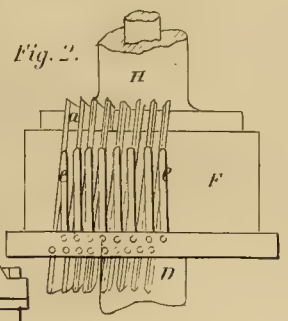

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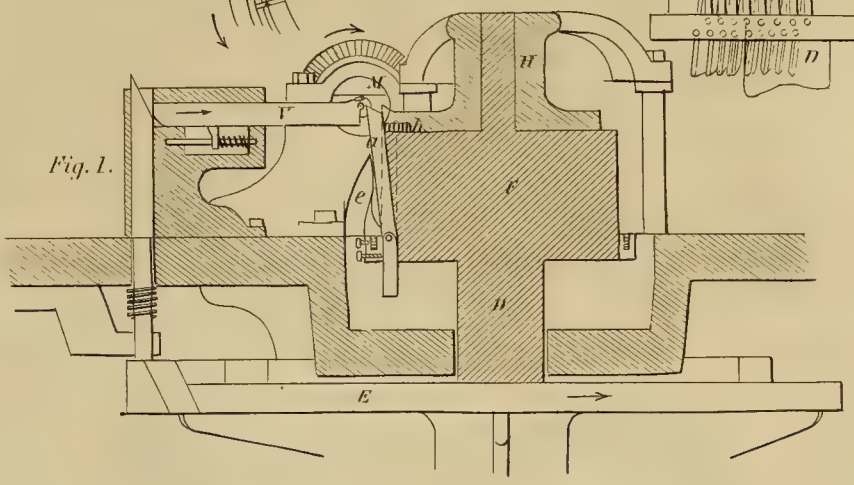

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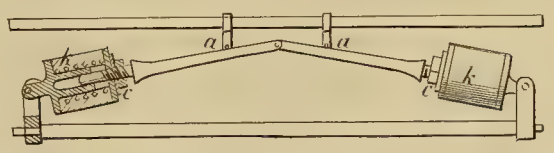

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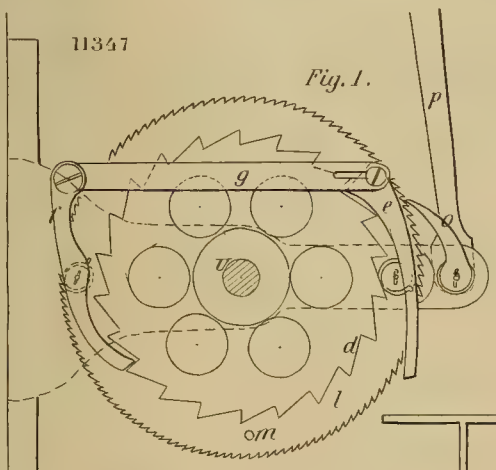

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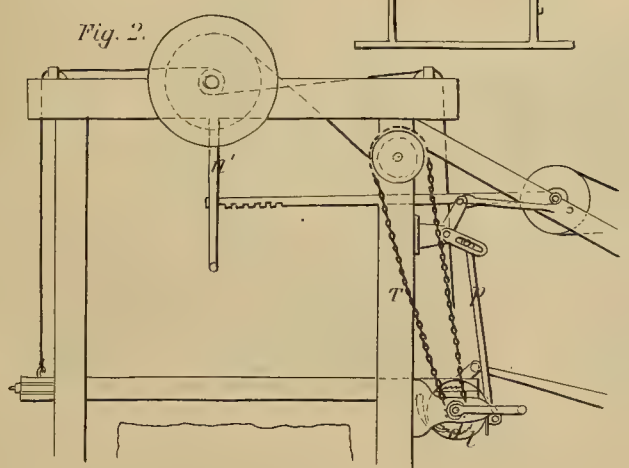

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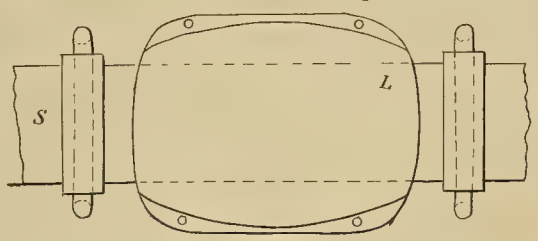

Fig. 2.

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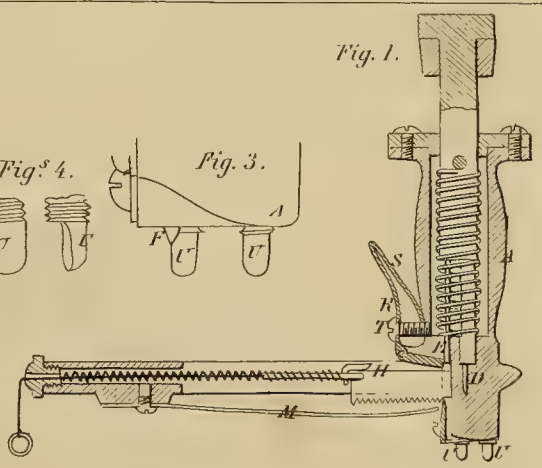

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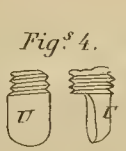

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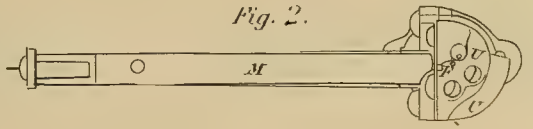

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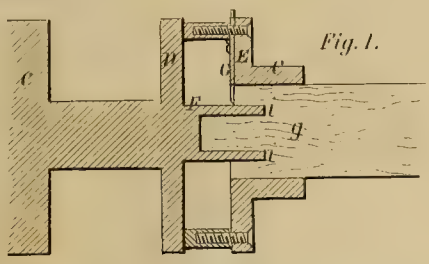

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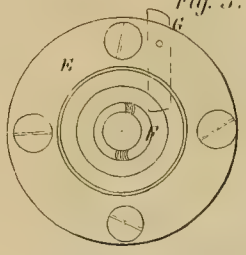

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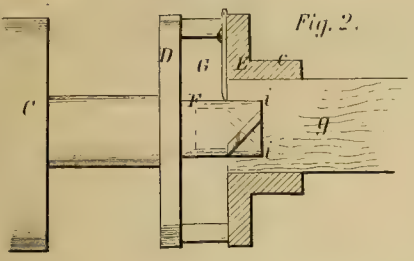

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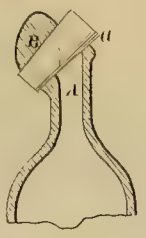

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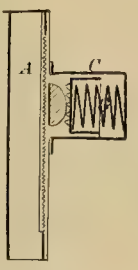

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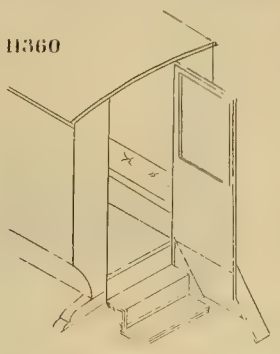

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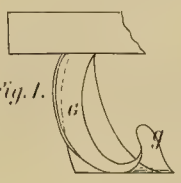

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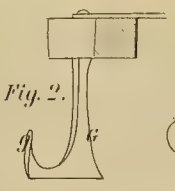

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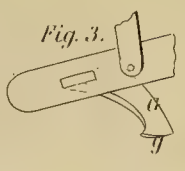

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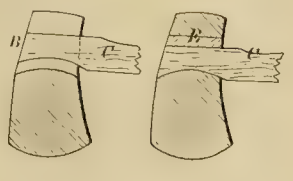

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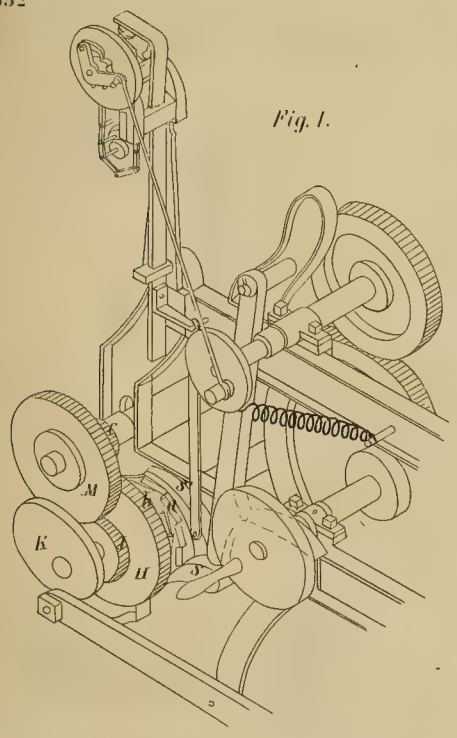

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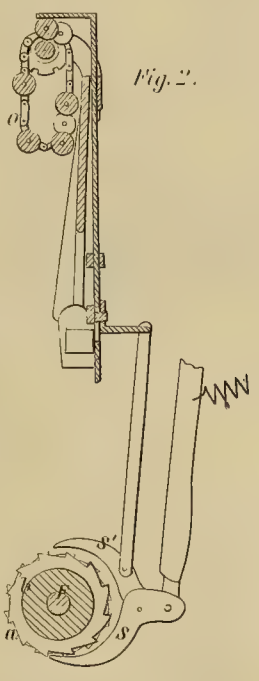

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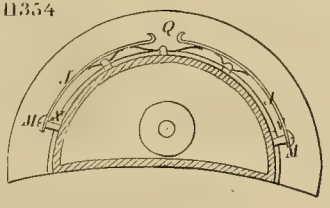

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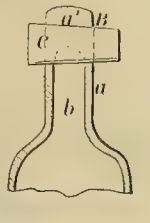

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Fig. 1.

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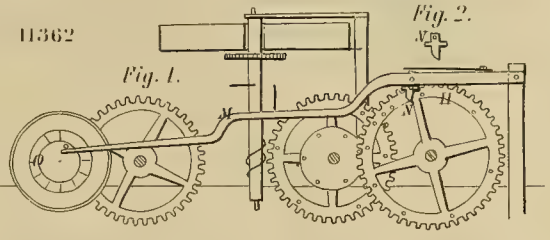

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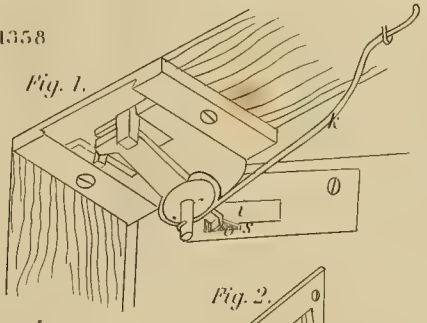

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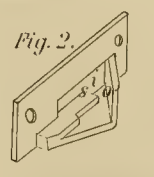

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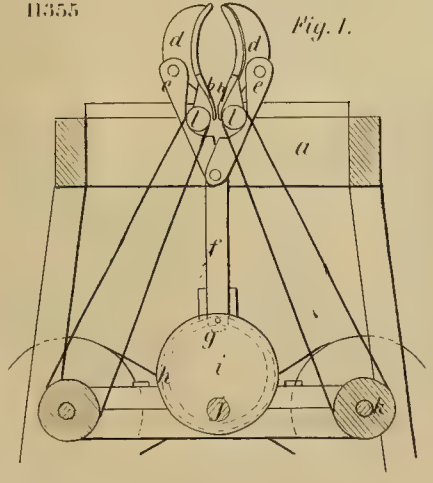

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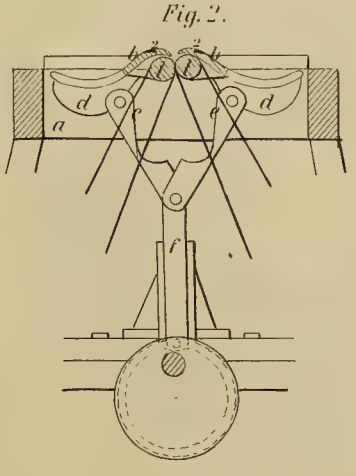

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Fig. 2.

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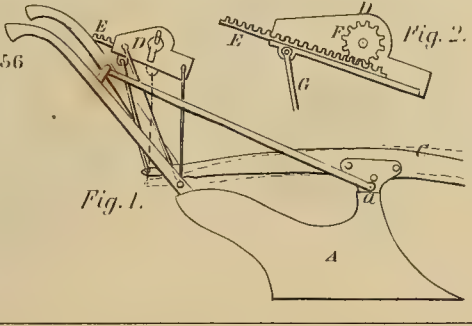

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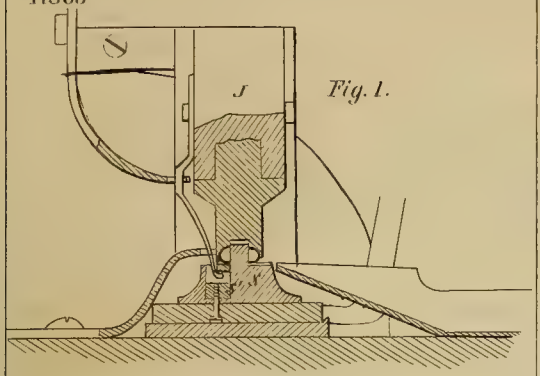

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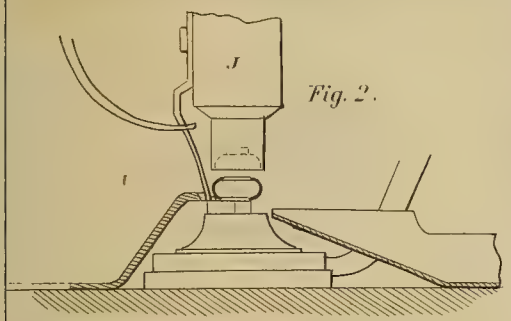

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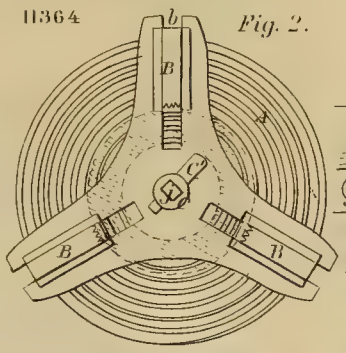

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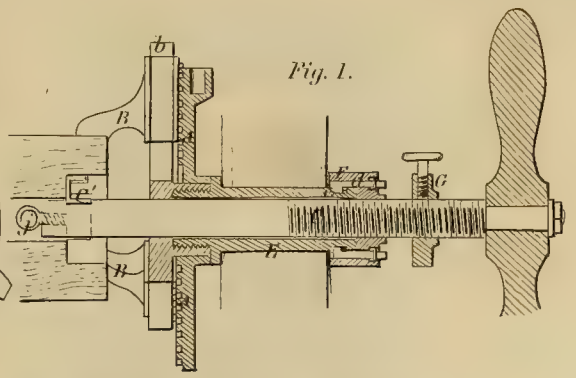

Fig. 1.

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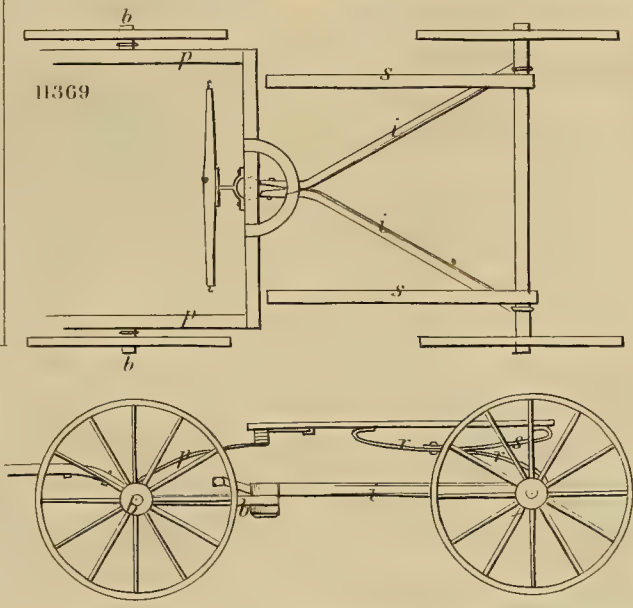

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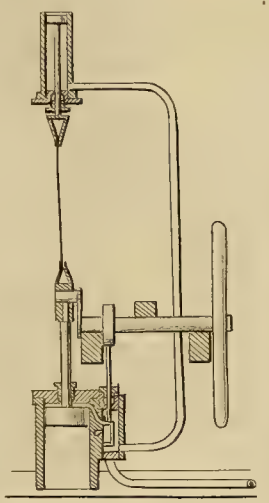

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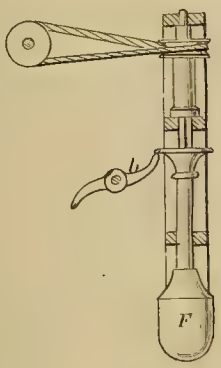

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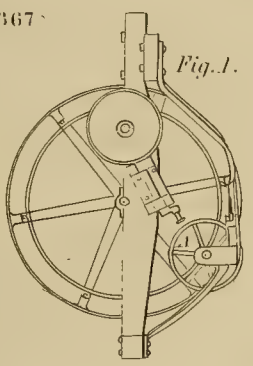

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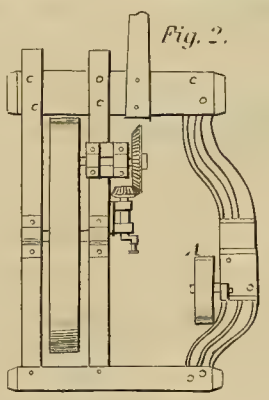

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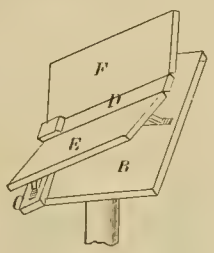
11366



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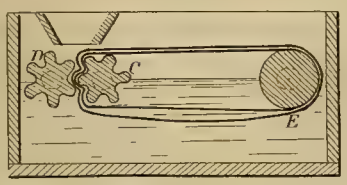

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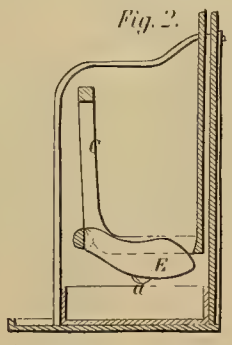

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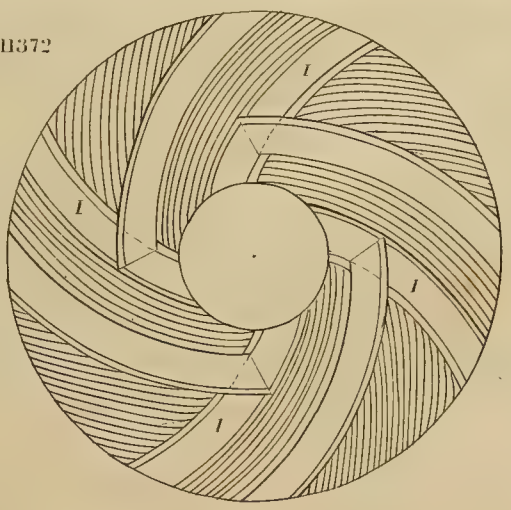

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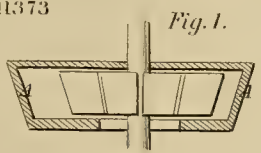

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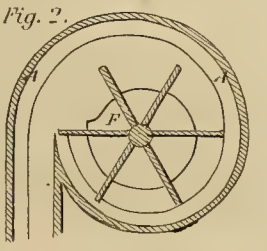

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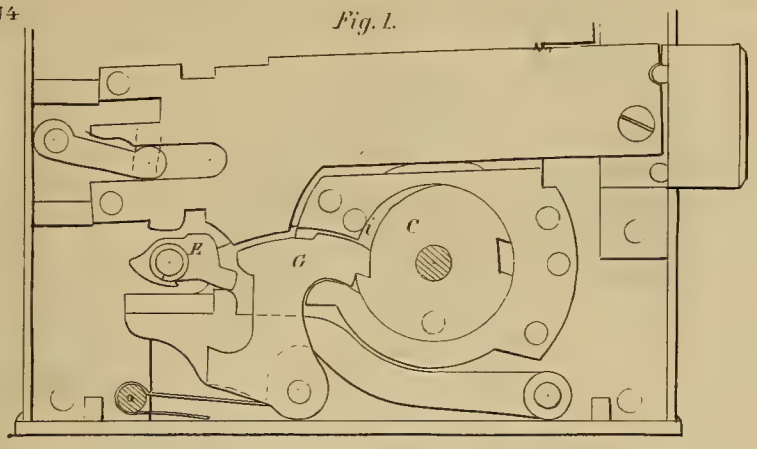

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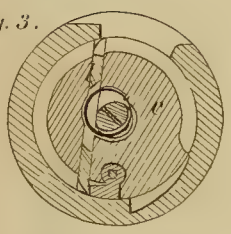

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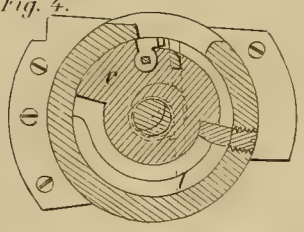

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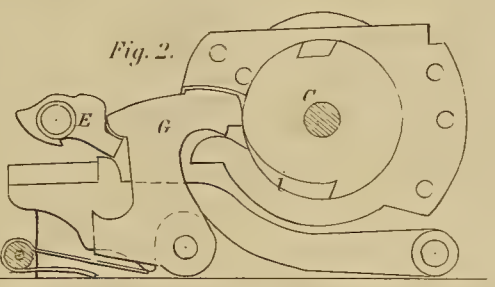

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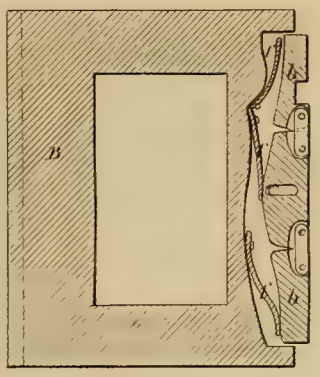

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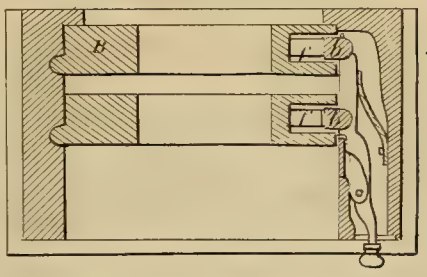

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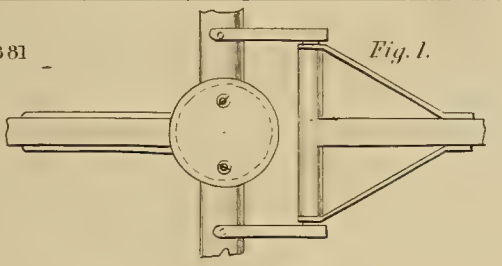


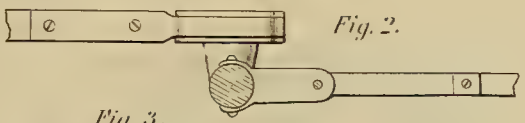


Fig. 2.

Fig. 3.

11378 Fig. 2.

Fig. 1.

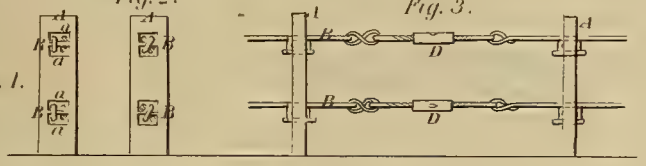
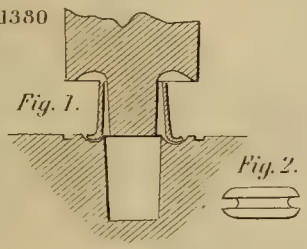


Fig. 3.

11380 Fig. 1.



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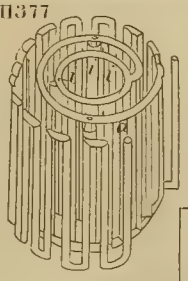

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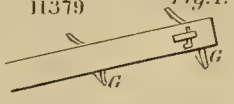

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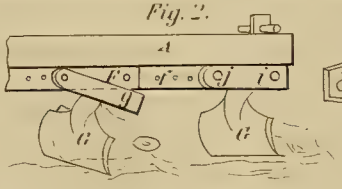

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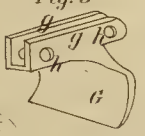

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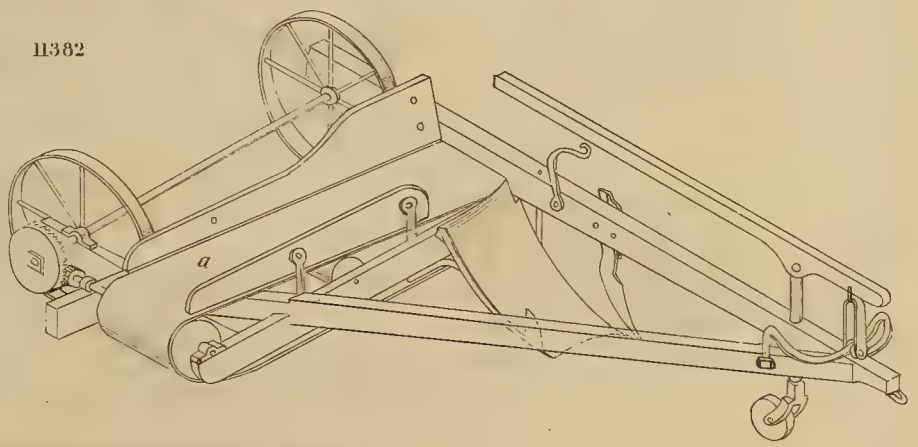

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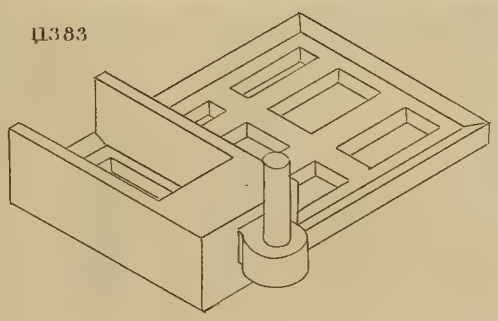

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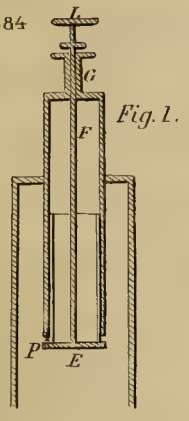

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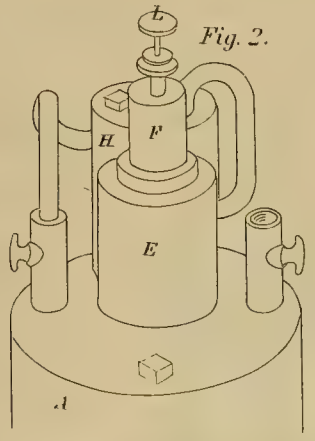

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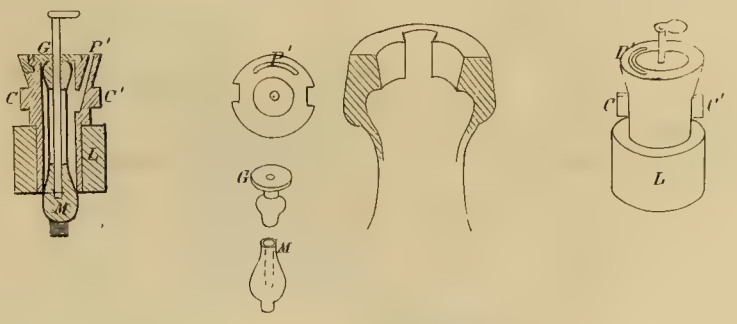

Fig. 1.

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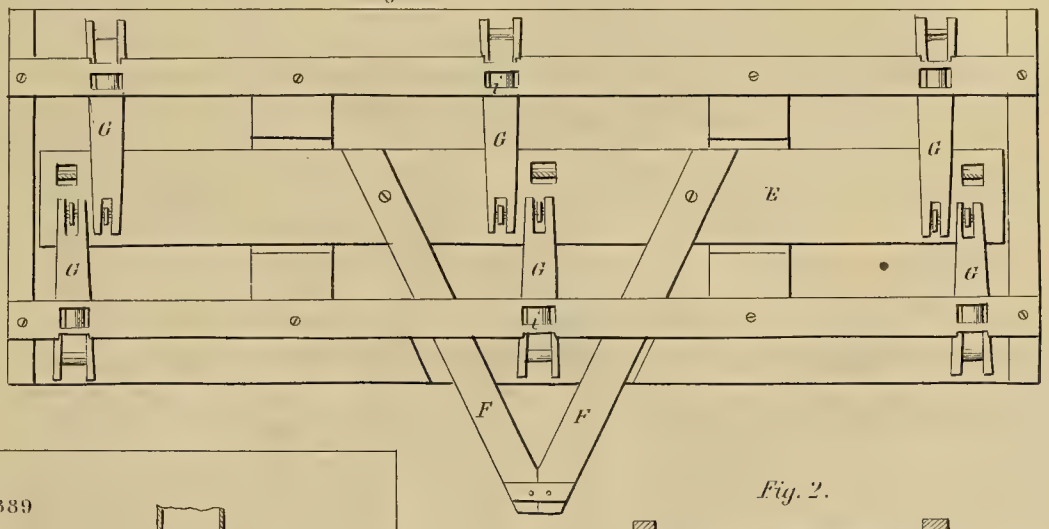

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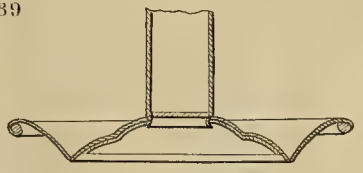

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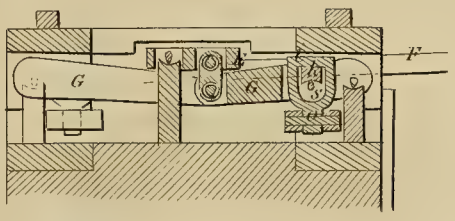

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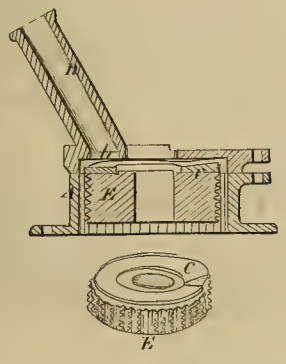

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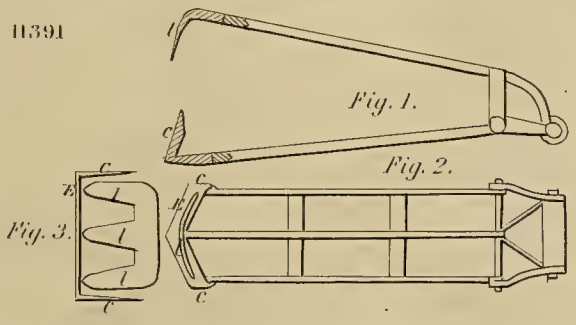

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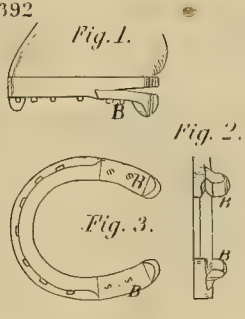

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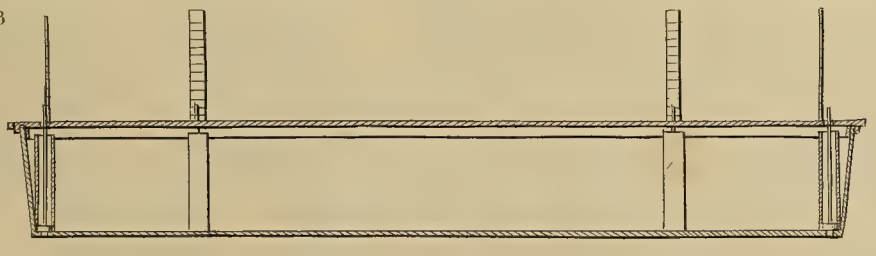

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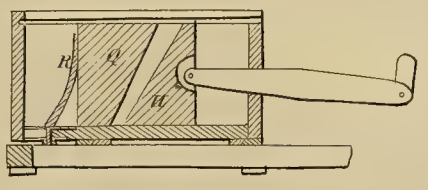

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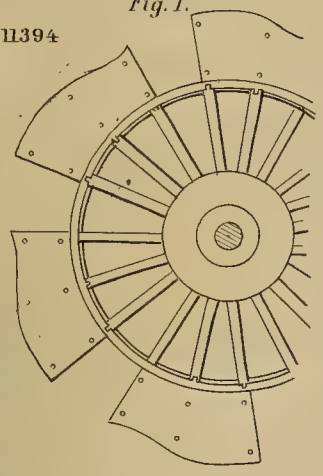

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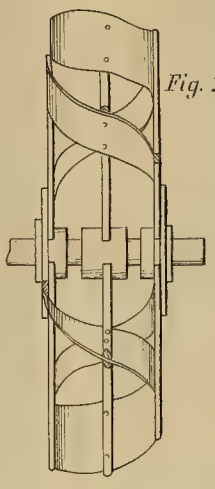

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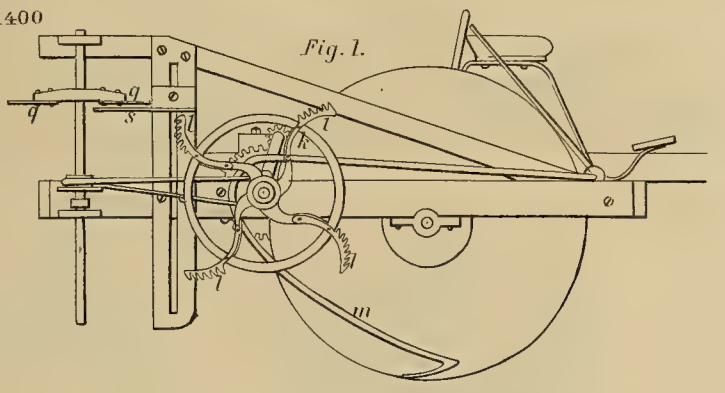

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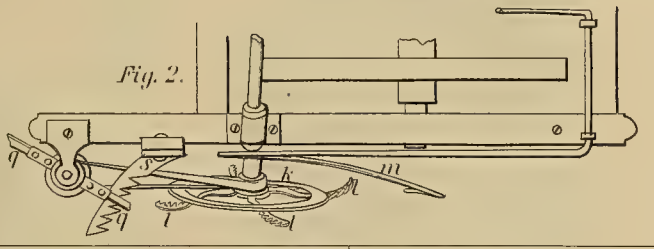

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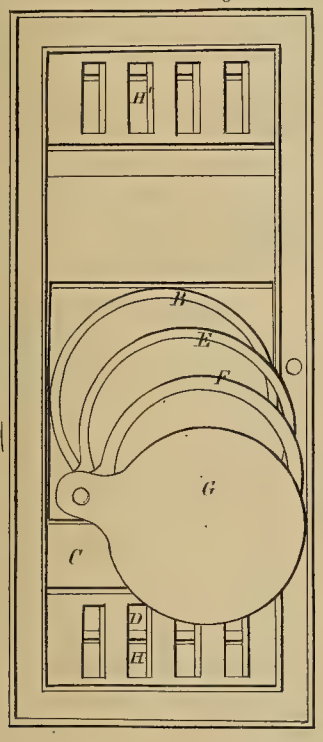

Fig. 2.

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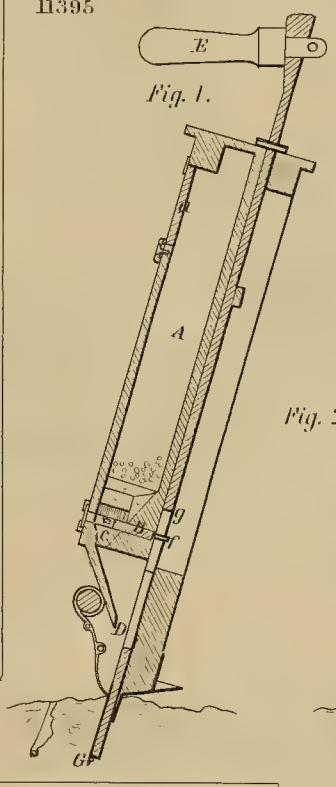

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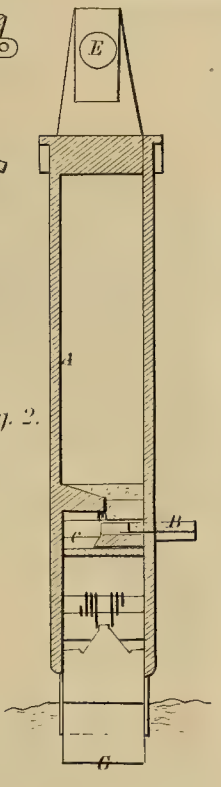

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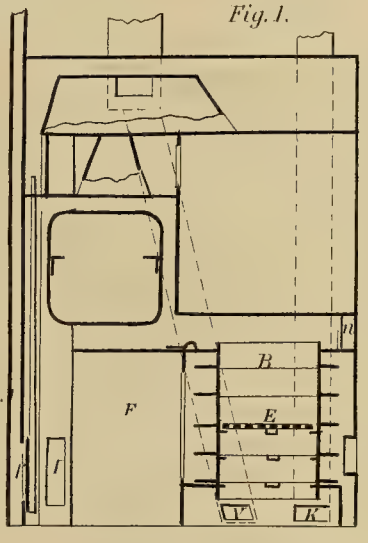

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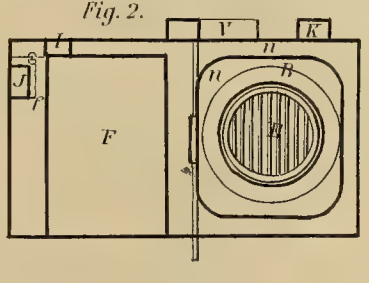

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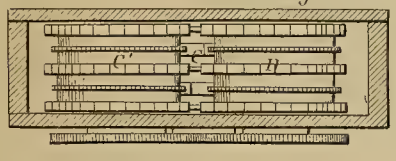

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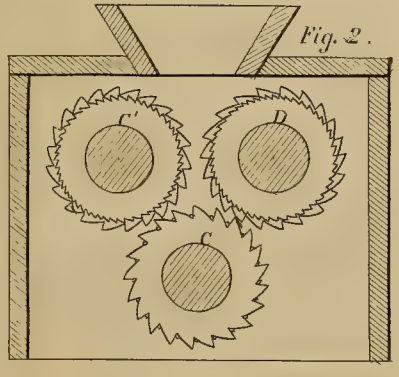

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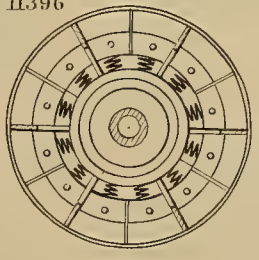

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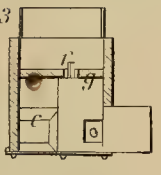

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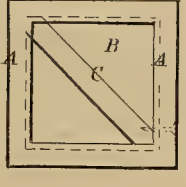

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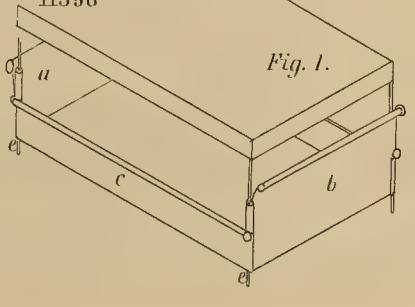

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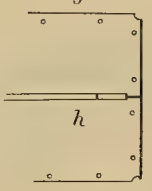

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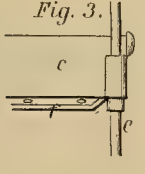

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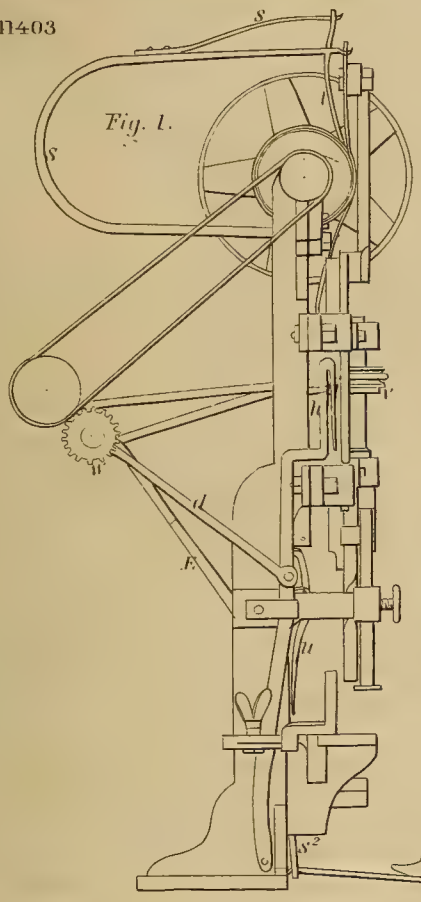
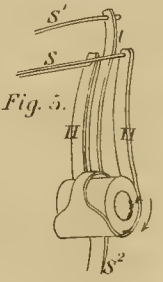


Fig. 5.



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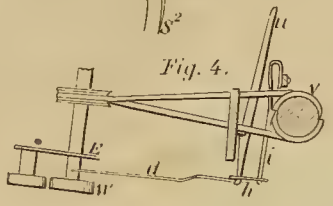

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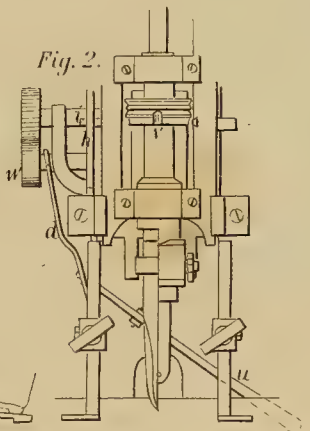

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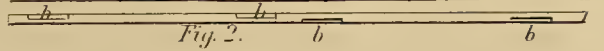

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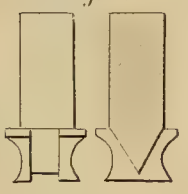
Figs 2.

Figs 3.



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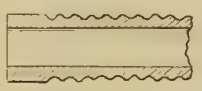

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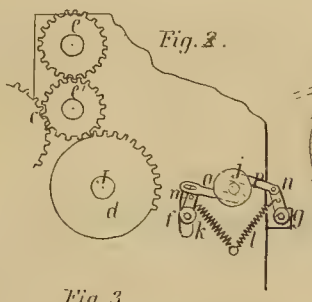

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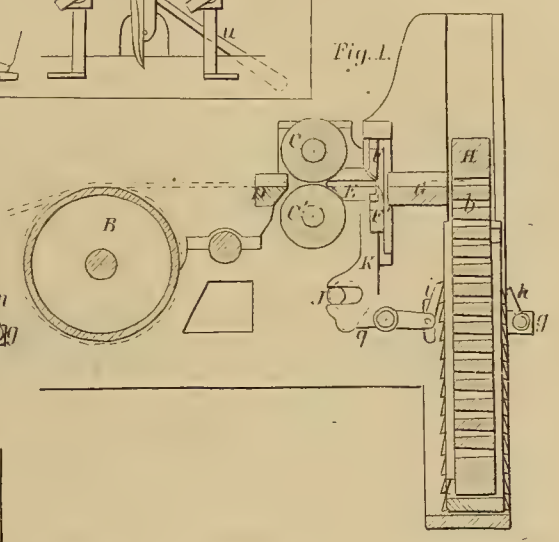

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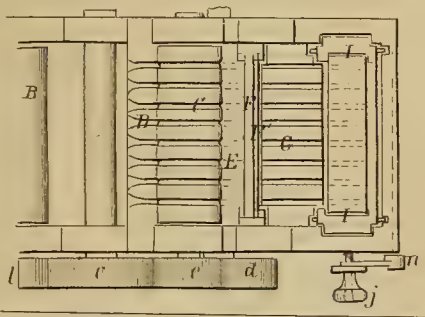

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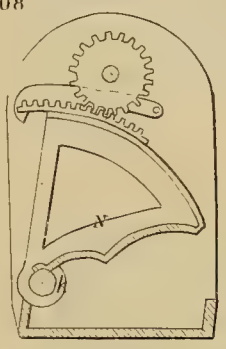

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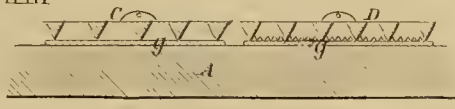

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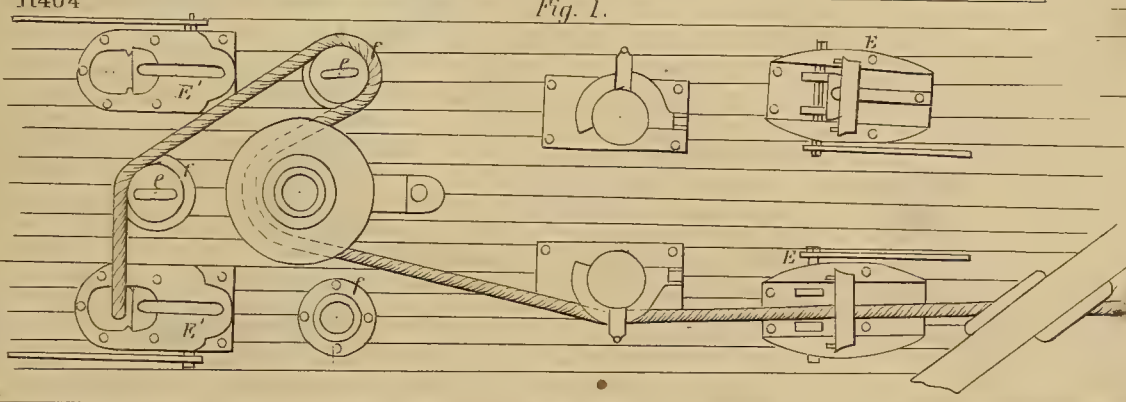

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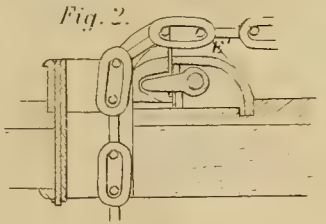

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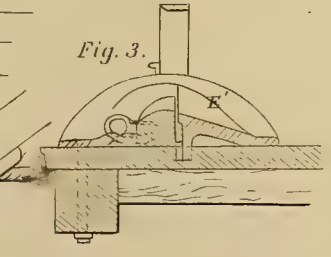

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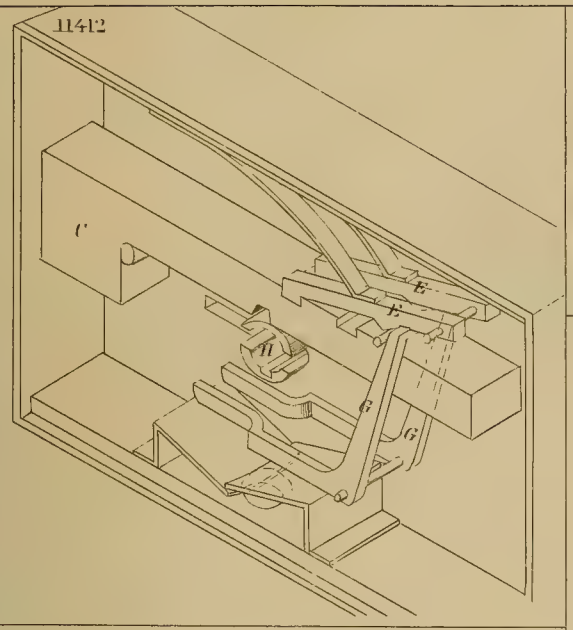

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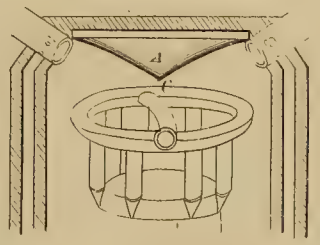

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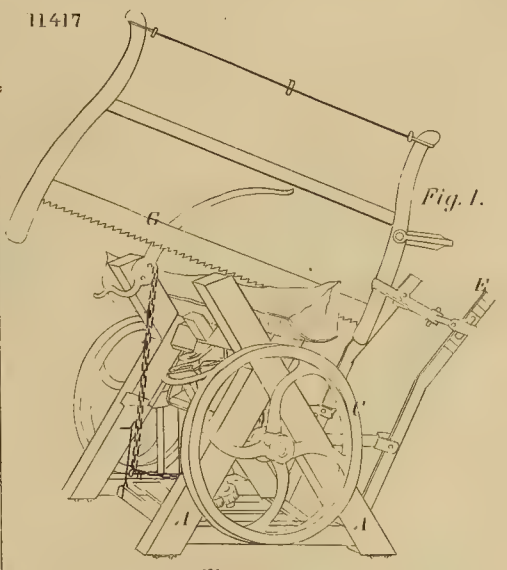

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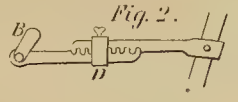

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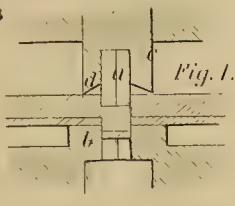

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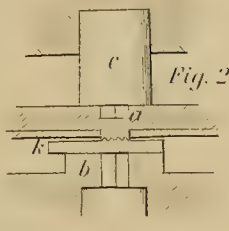

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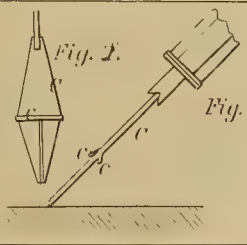

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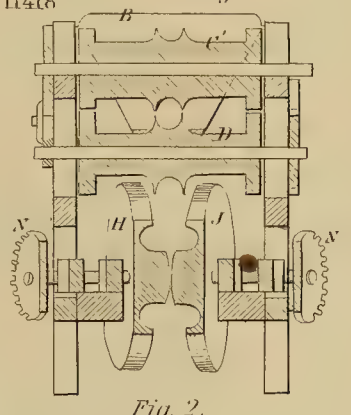

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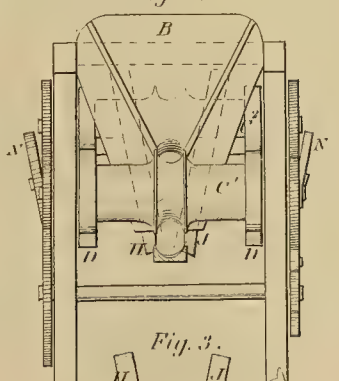

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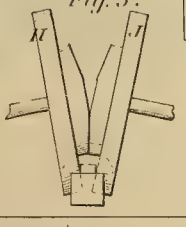

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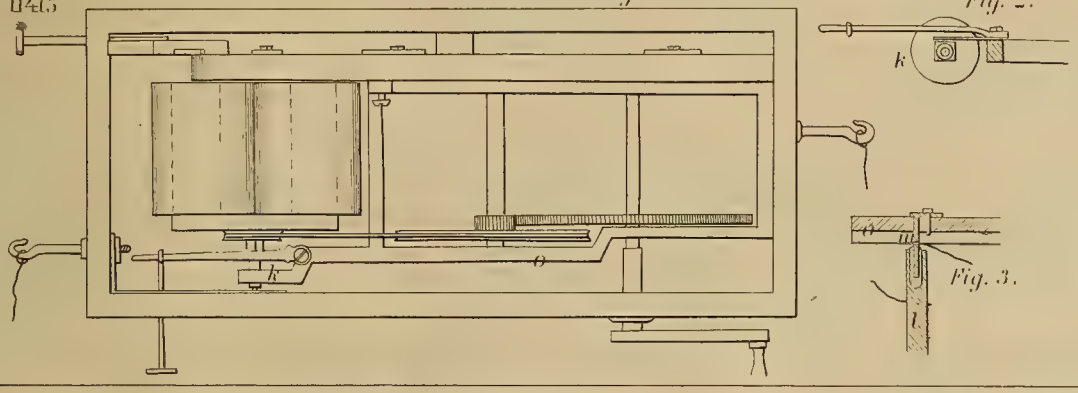

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Fig. 3.

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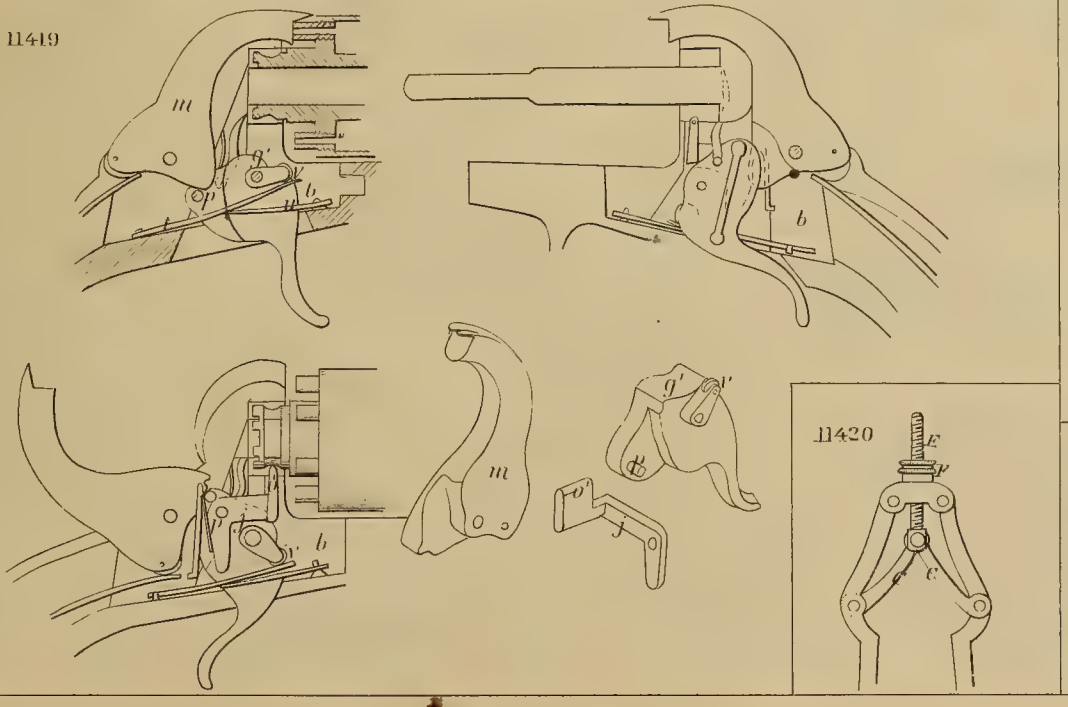

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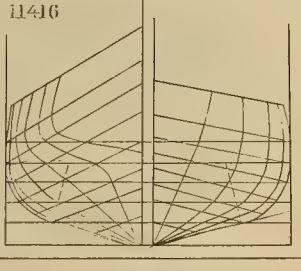

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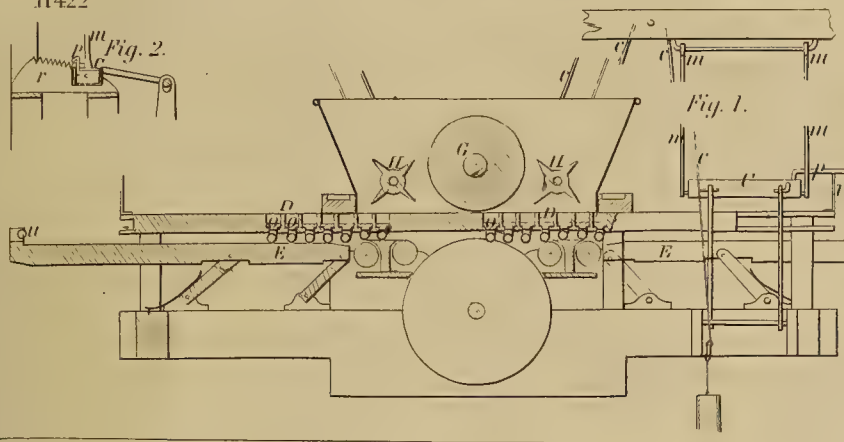

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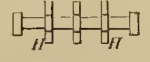

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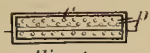

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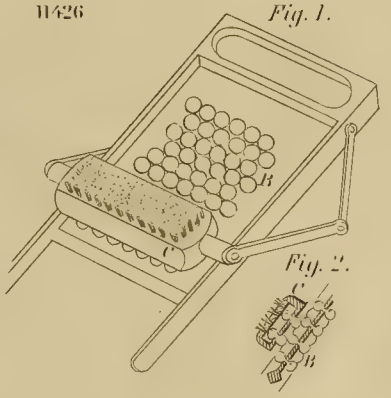

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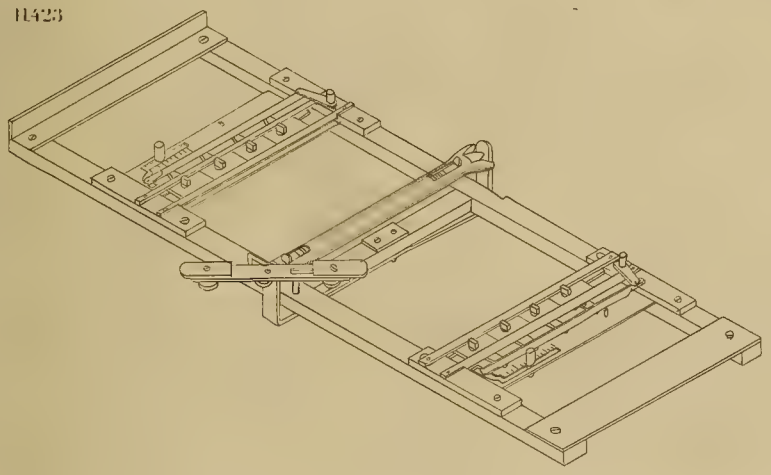

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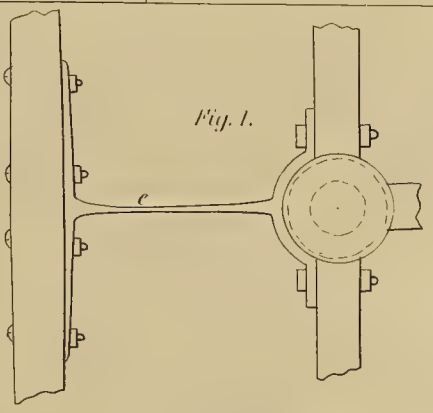

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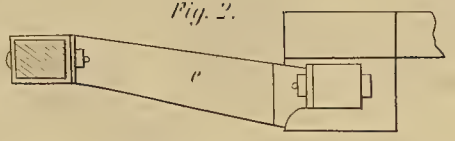

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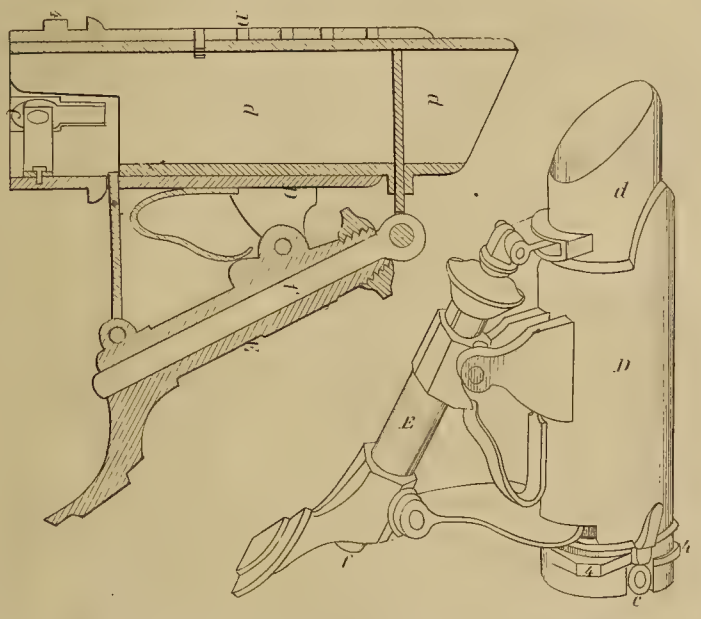

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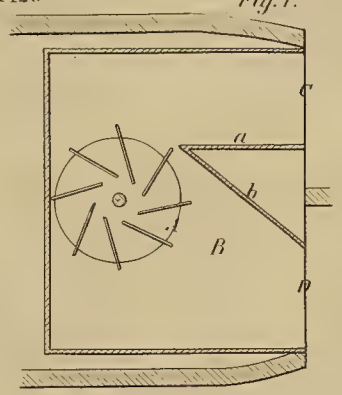

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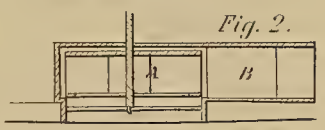

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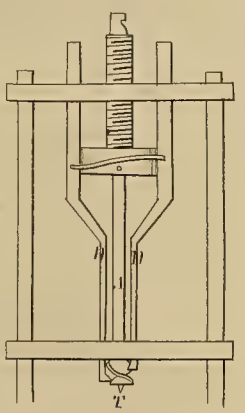

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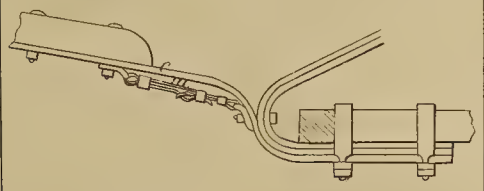

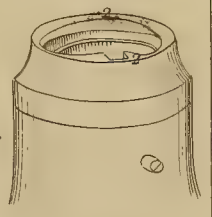

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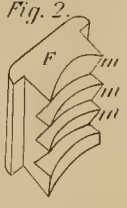

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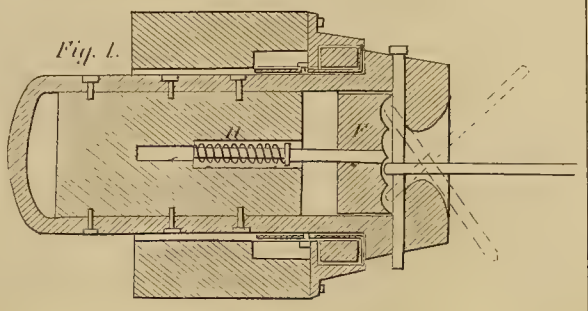

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Fig. 1.

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Fig. 1.

Fig. 4.

Fig. 3.

Fig. 2.

Fig.s 5.

Fig. 6.

Fig. 8.

Fig. 7.

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Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

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Fig. 3.

Fig. 4.

Fig. 2.

Fig. 1.

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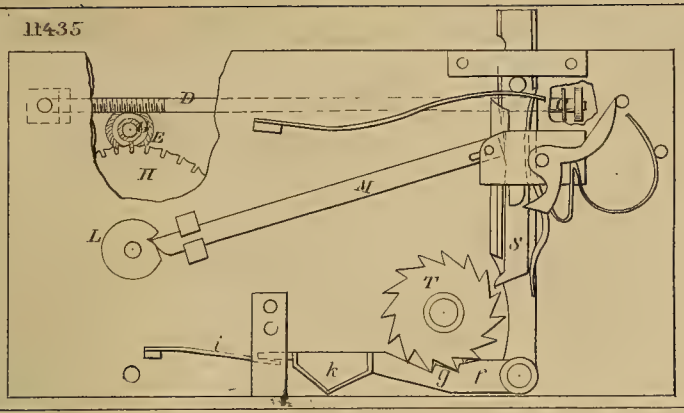

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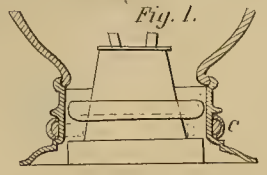

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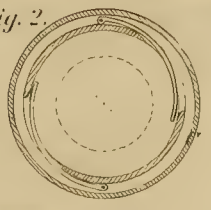

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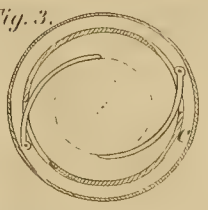

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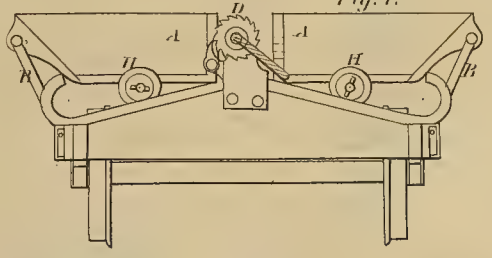

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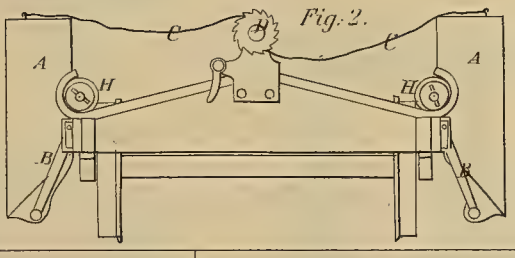

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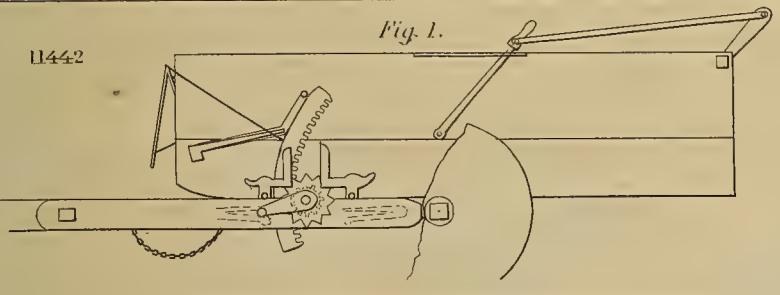

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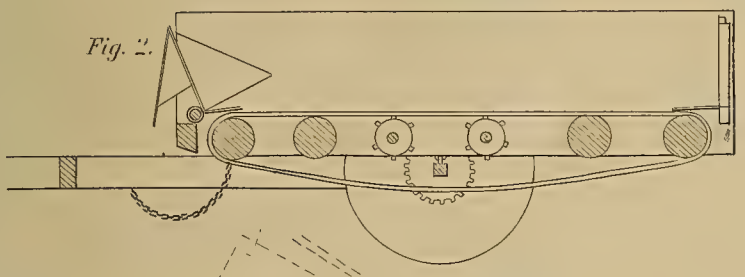

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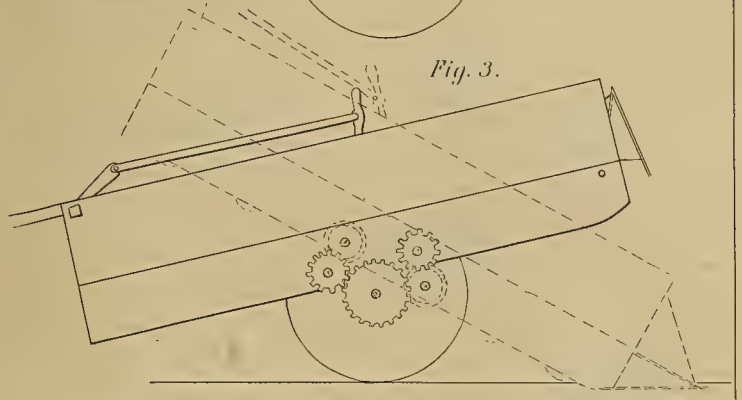

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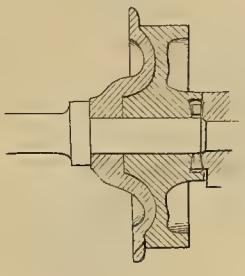

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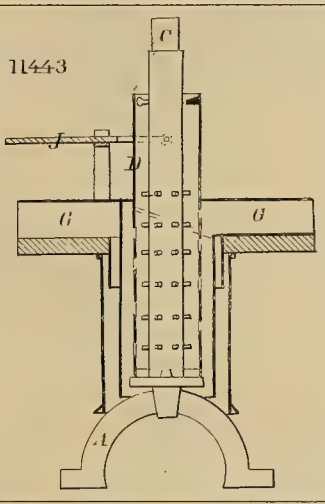

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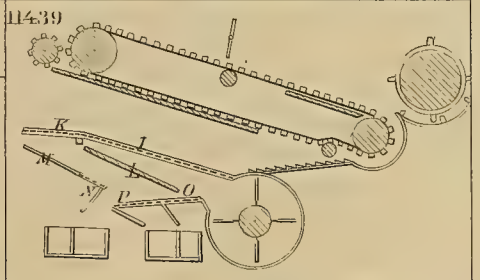
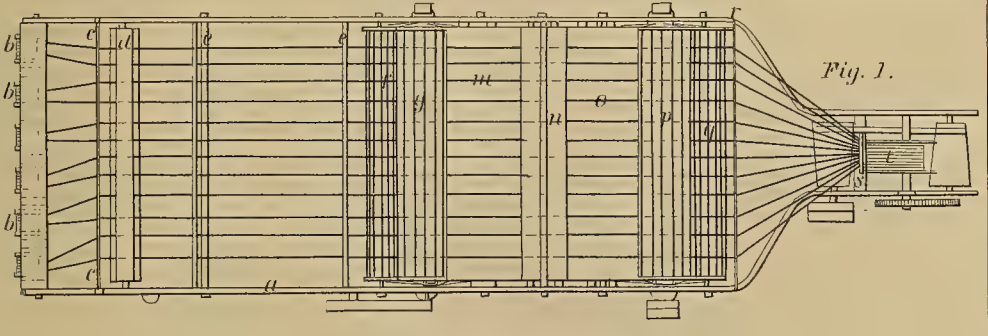


11436

Fig. 1.



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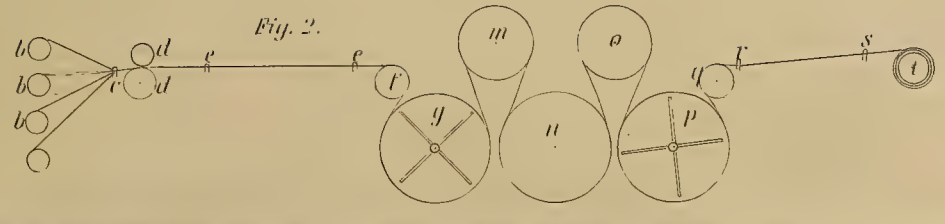

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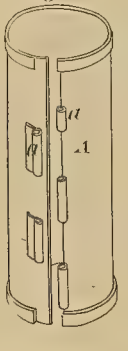

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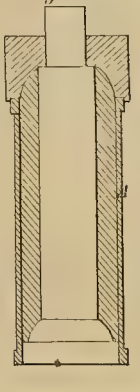

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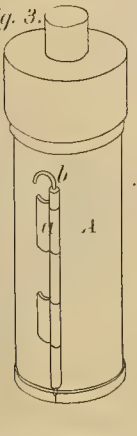

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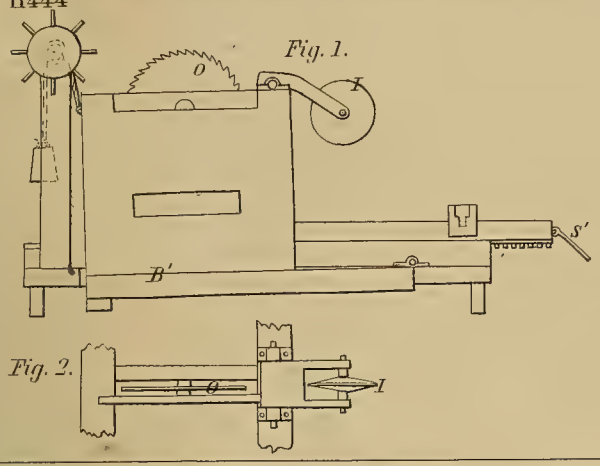

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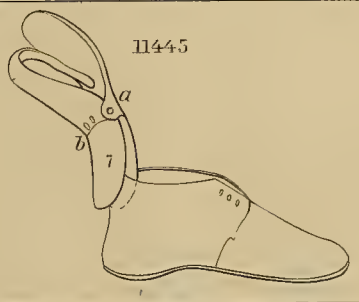

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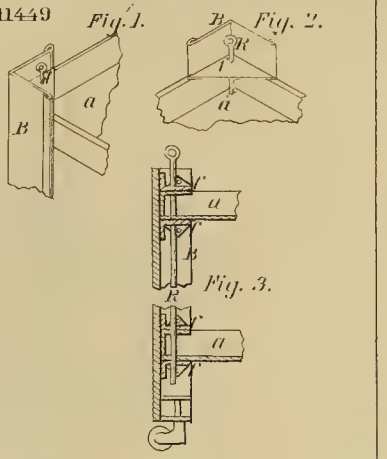

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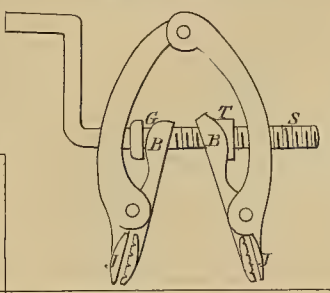

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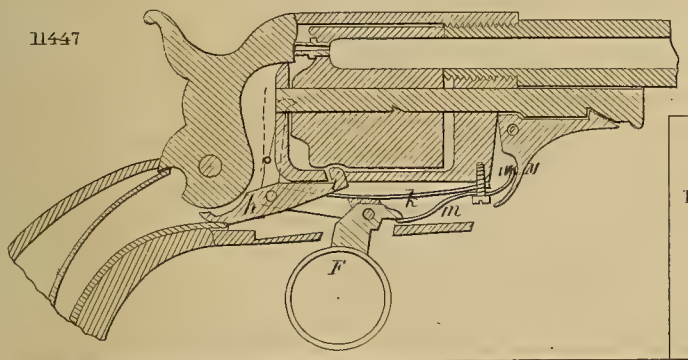

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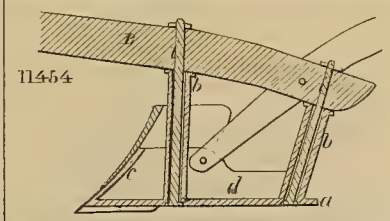

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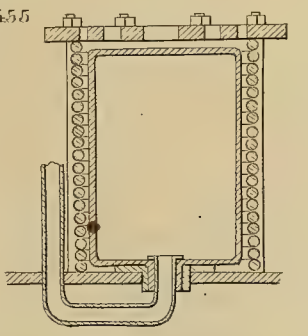

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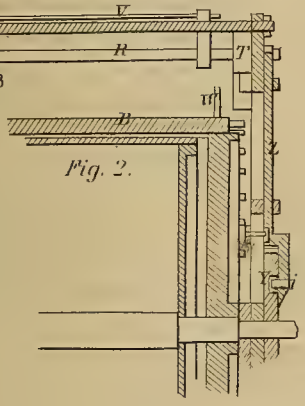

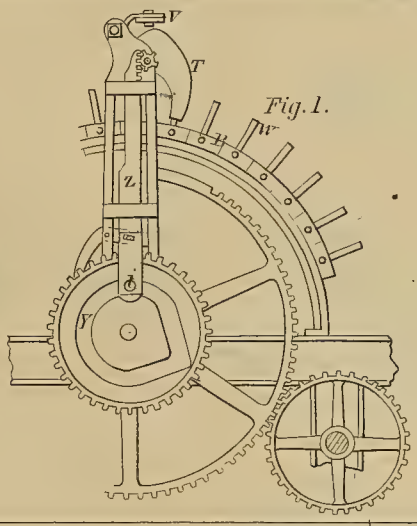

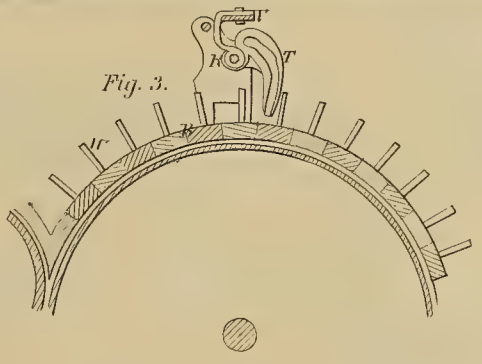

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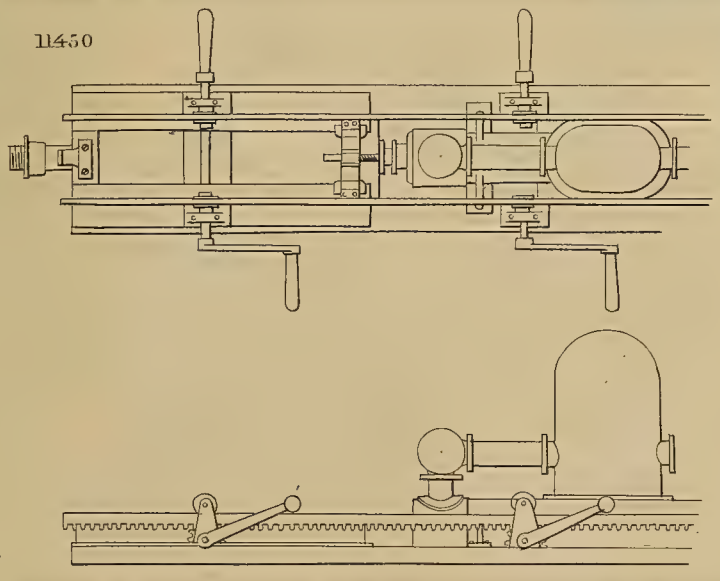

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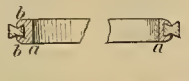

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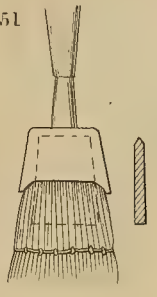

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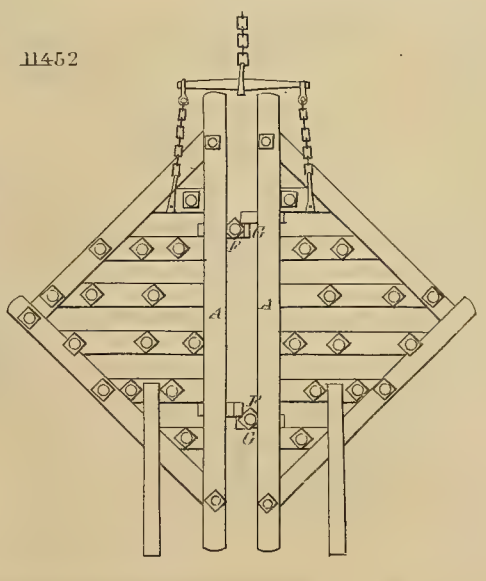

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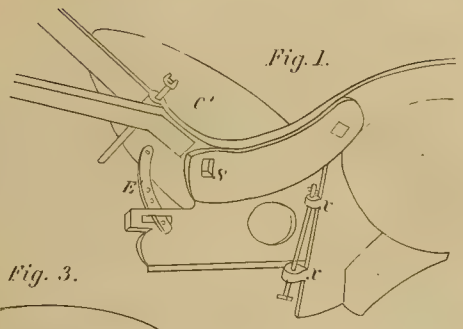
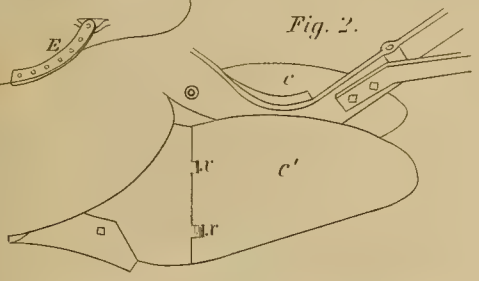


Fig. 3.

Fig. 2.



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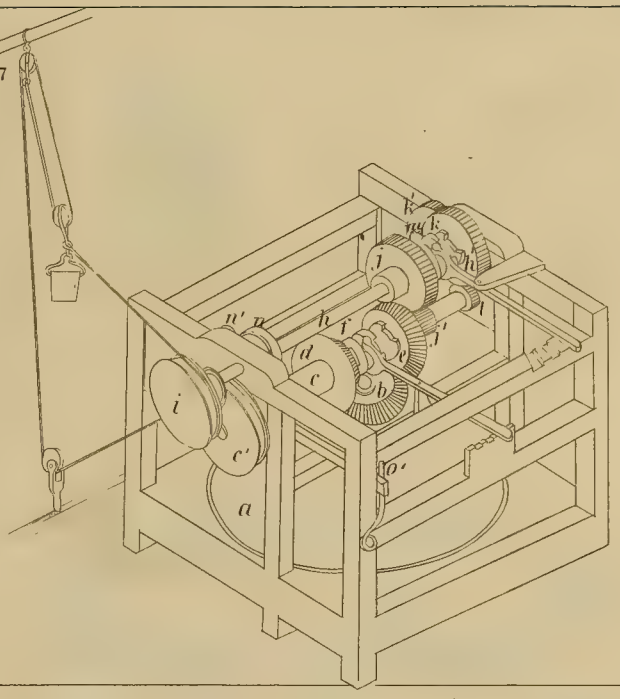

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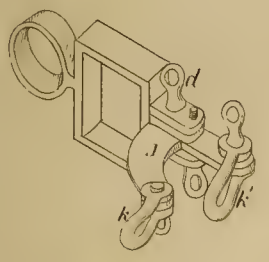

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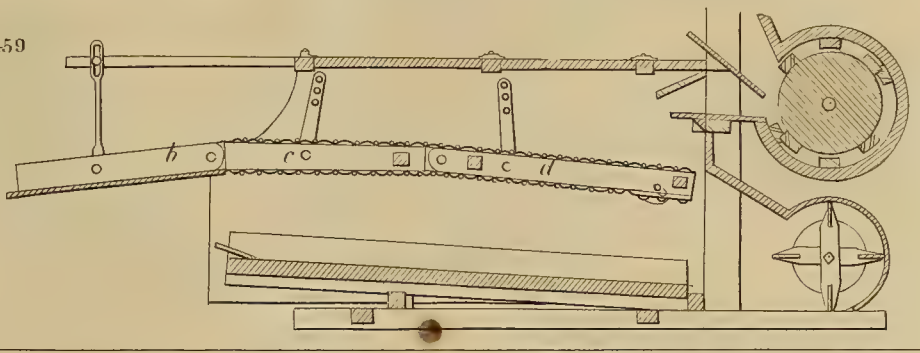

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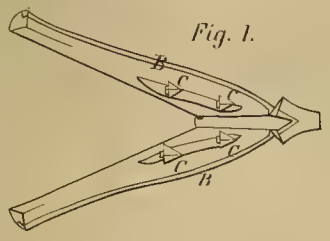

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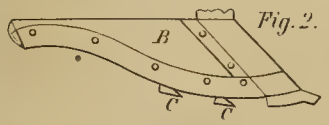

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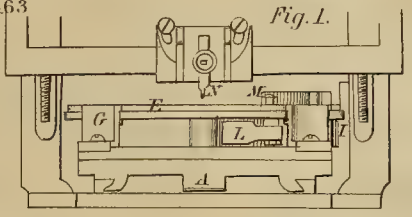

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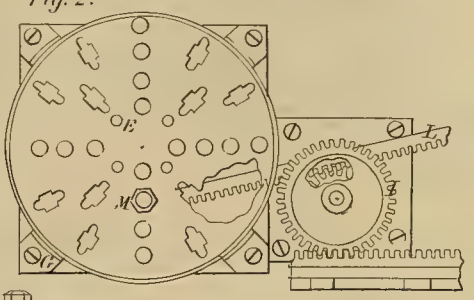

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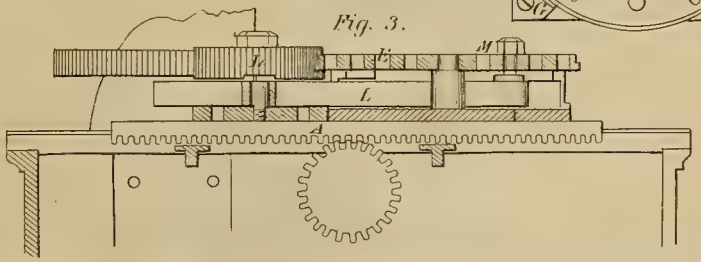

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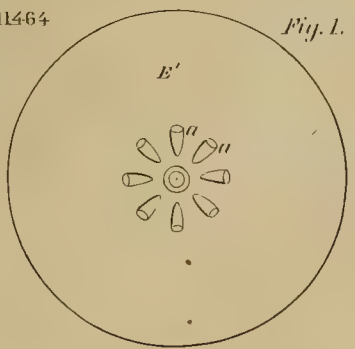

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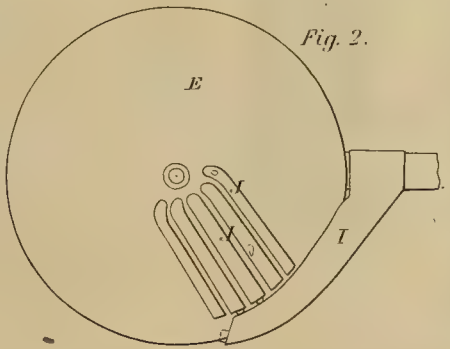

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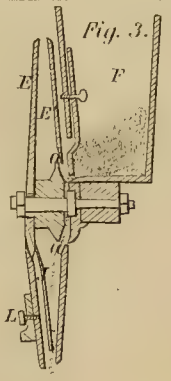

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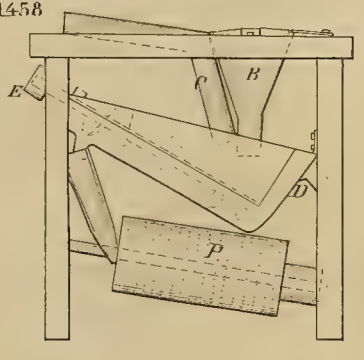

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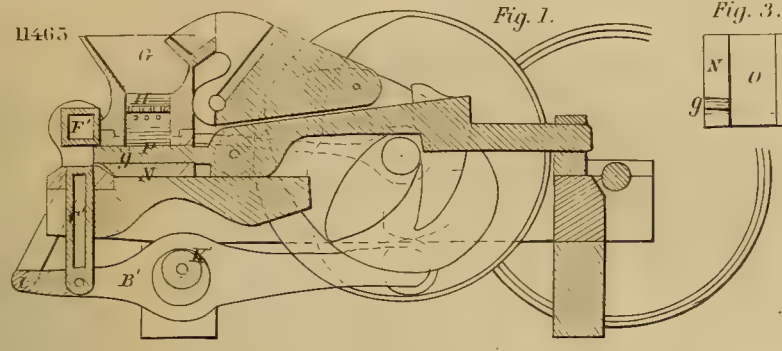

Fig. 1.

Fig. 3.

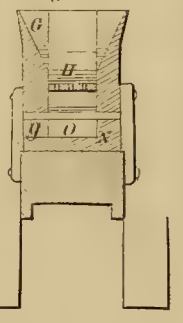

Fig. 2.

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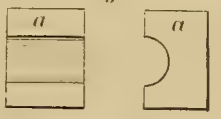
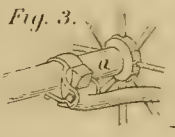


Fig. 1.



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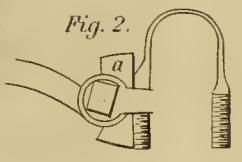

Fig. 2.

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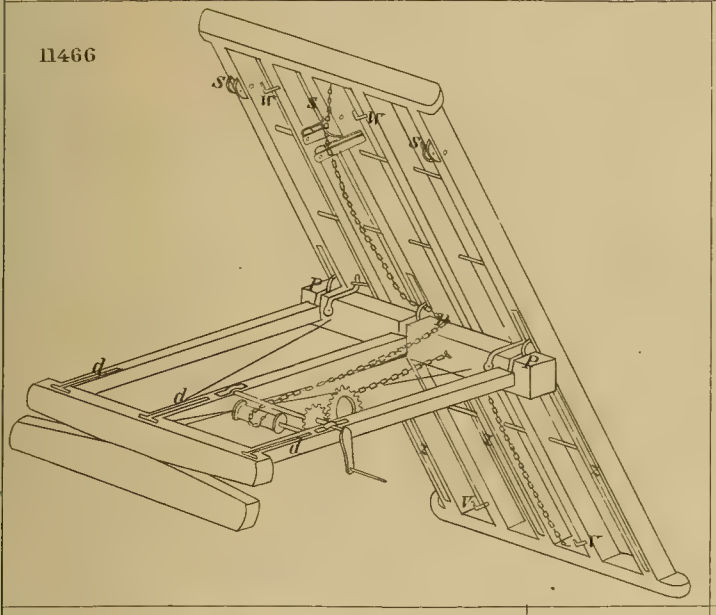

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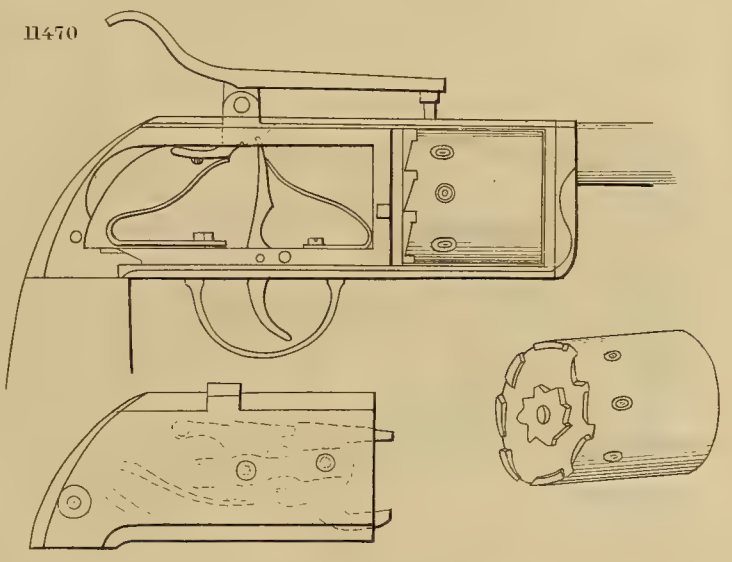

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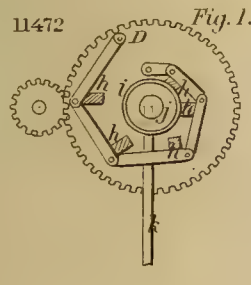

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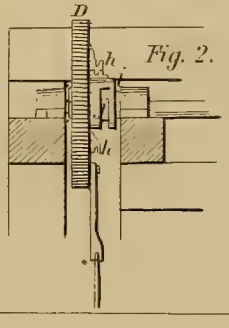

Fig. 2.

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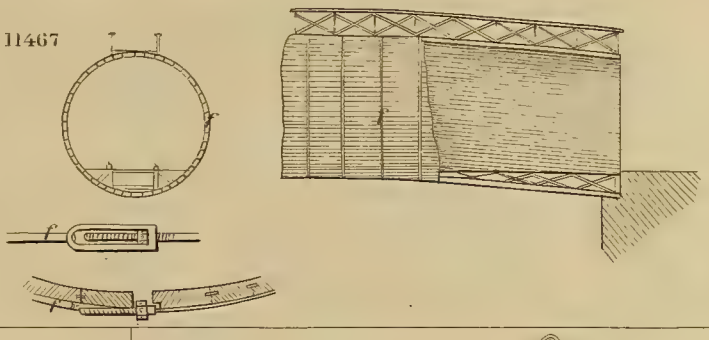

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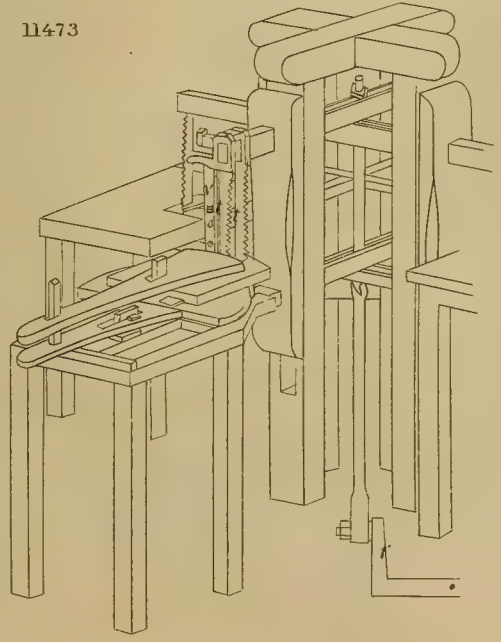

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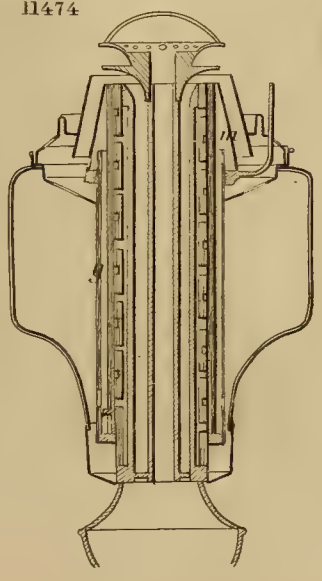

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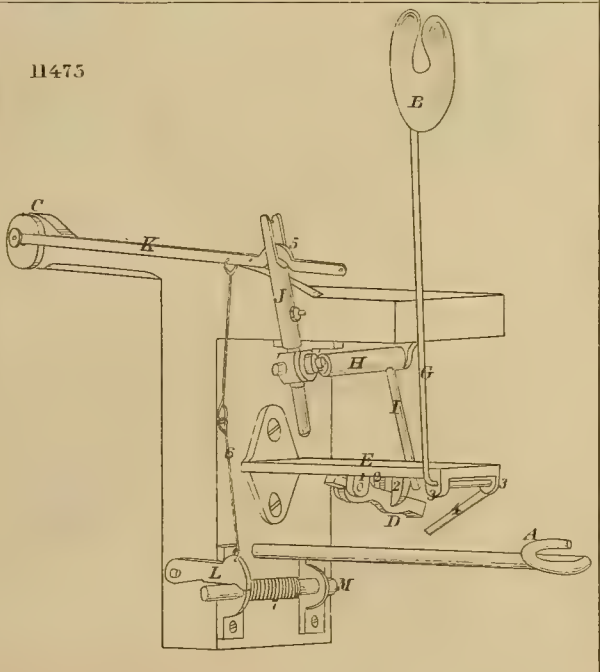

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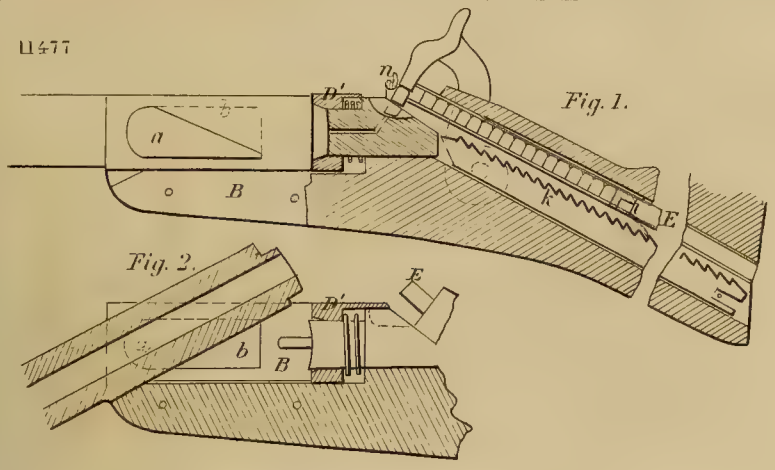

Fig. 1.

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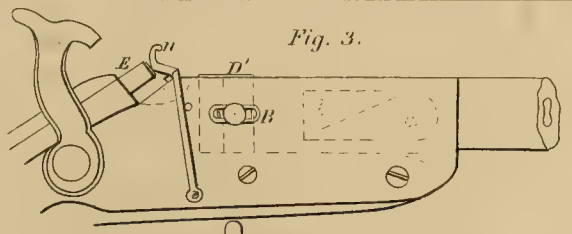

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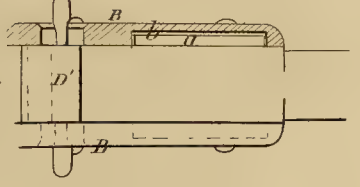

Fig. 4.

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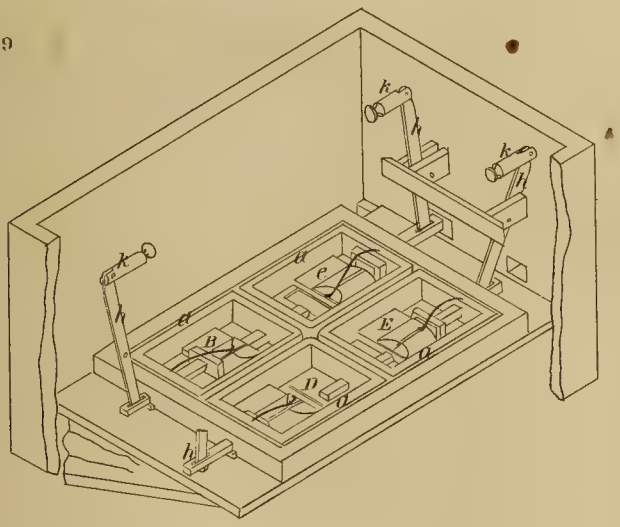

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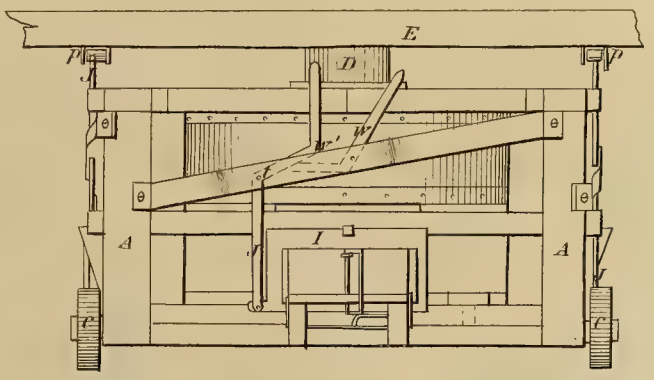

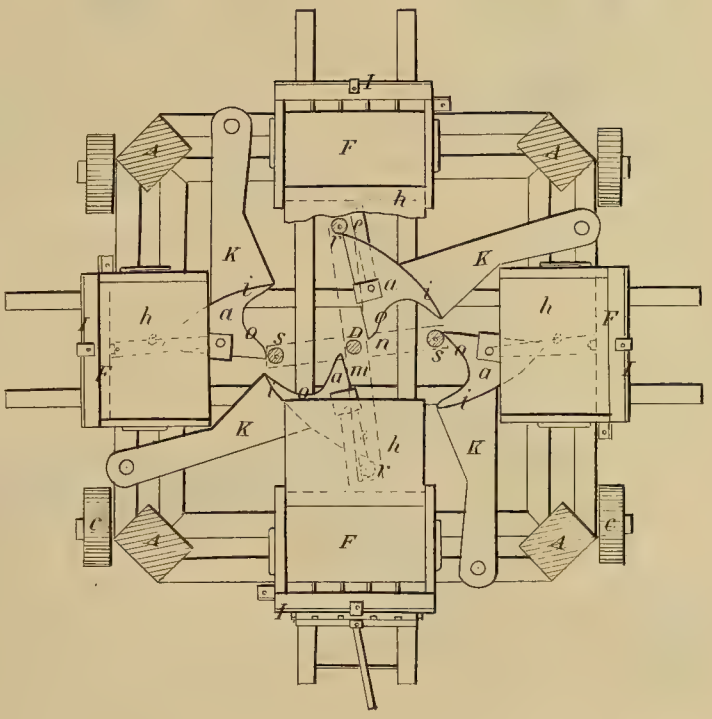

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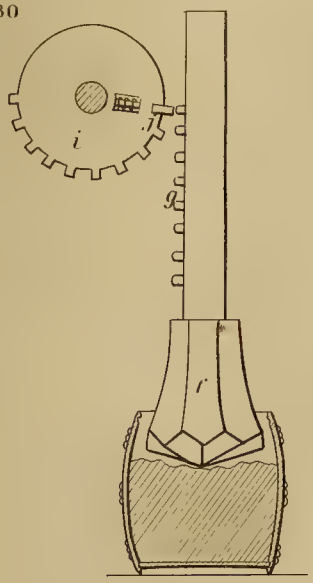

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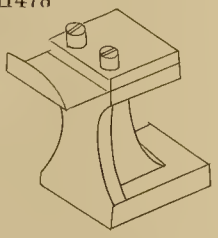

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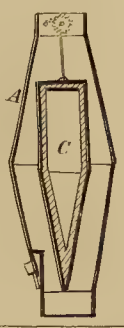

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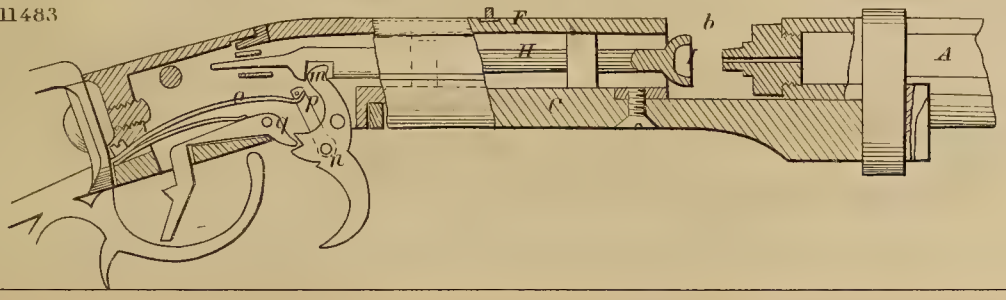

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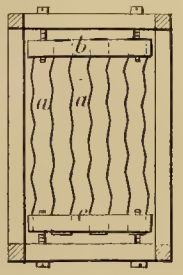

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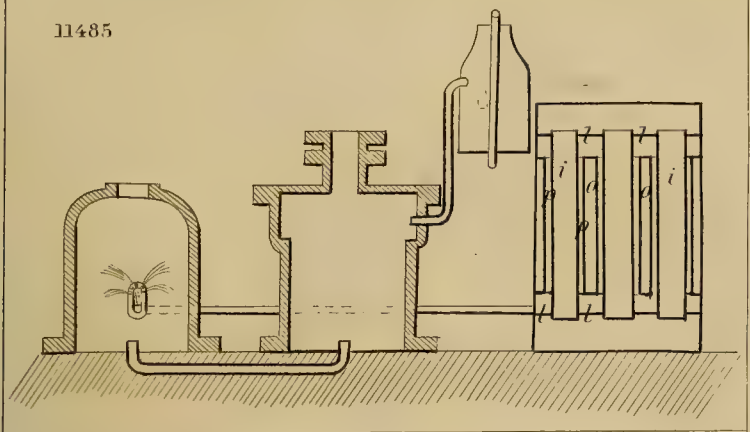

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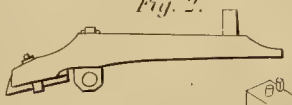

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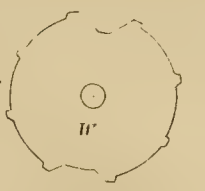

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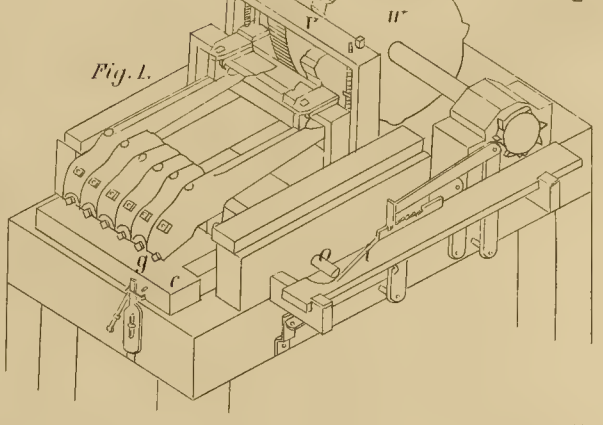

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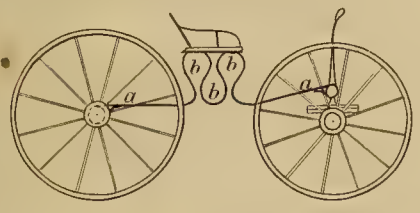

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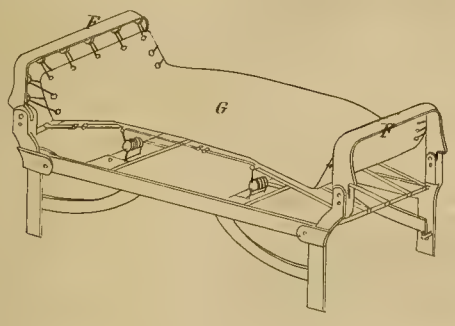

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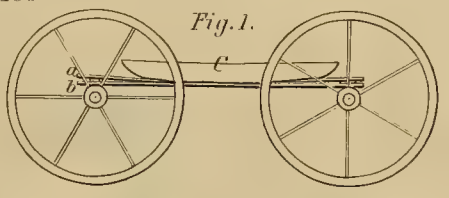

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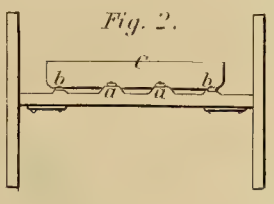

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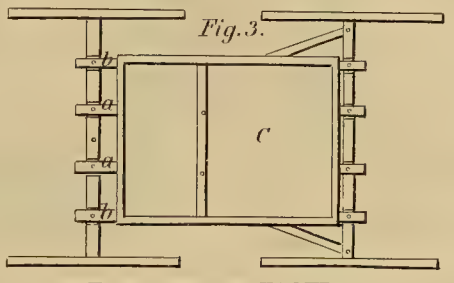

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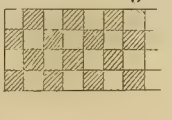

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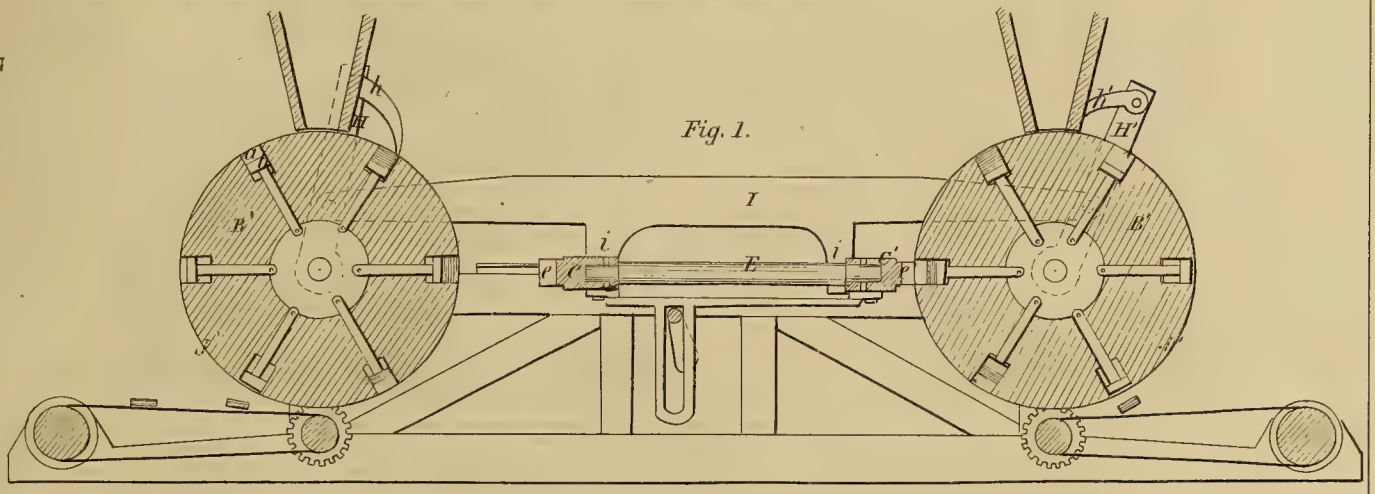

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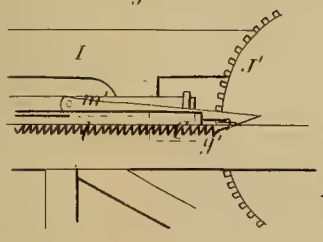

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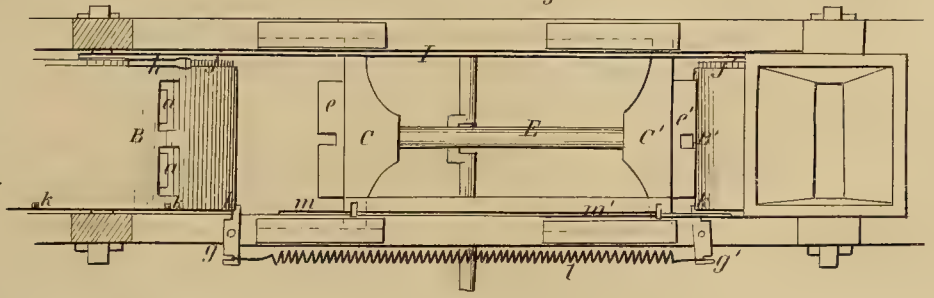

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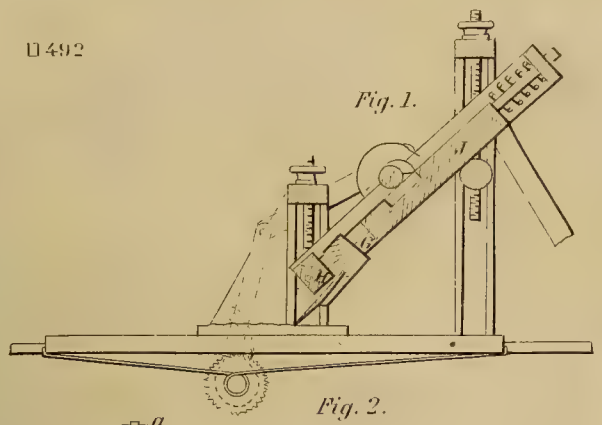

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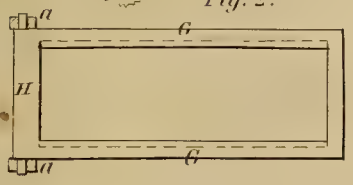

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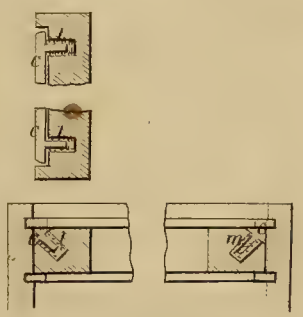

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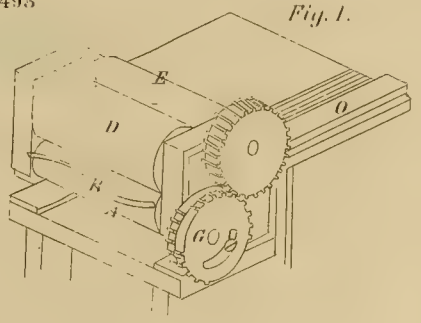

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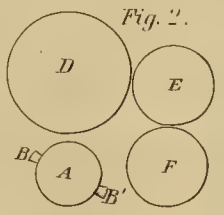

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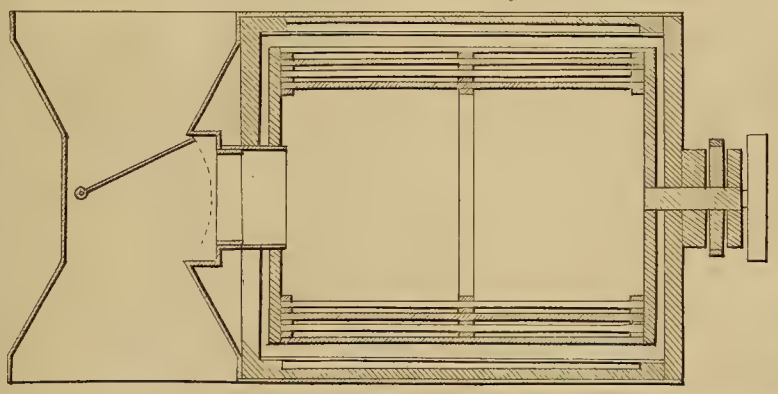

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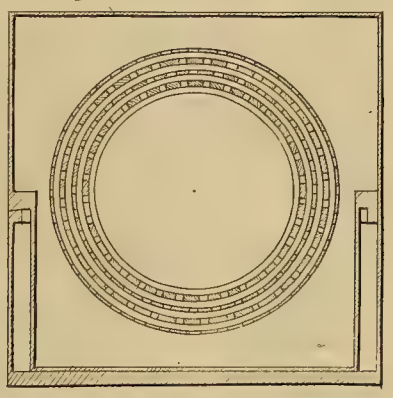

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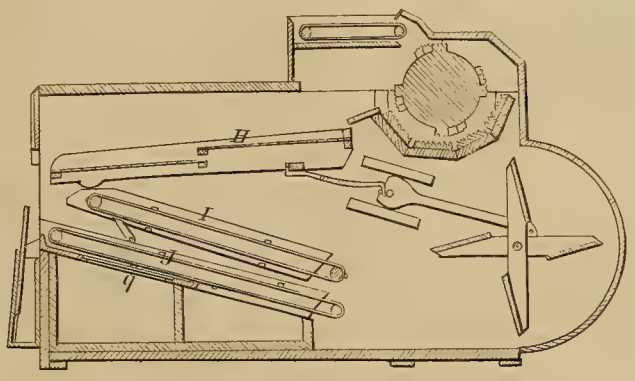

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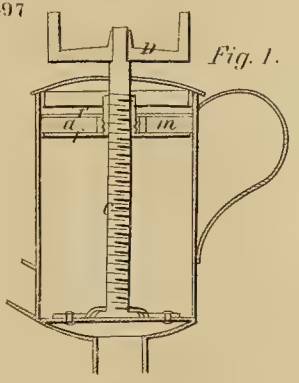

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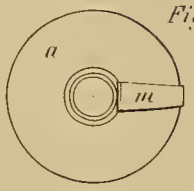

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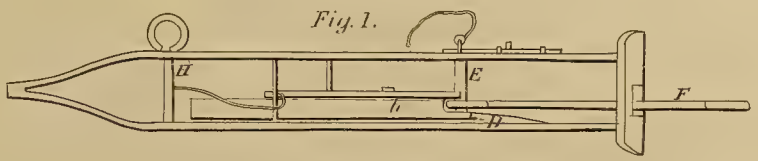

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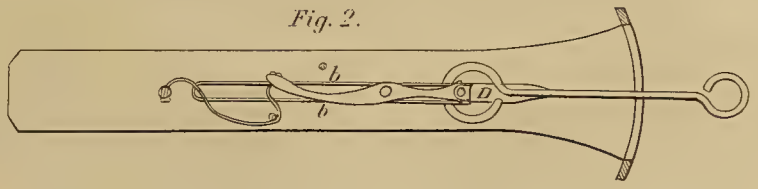

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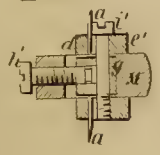

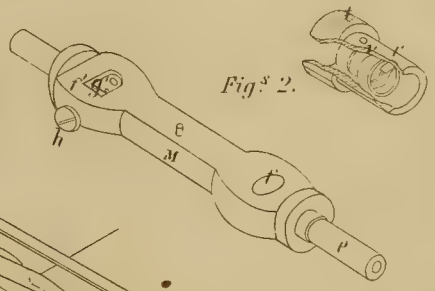

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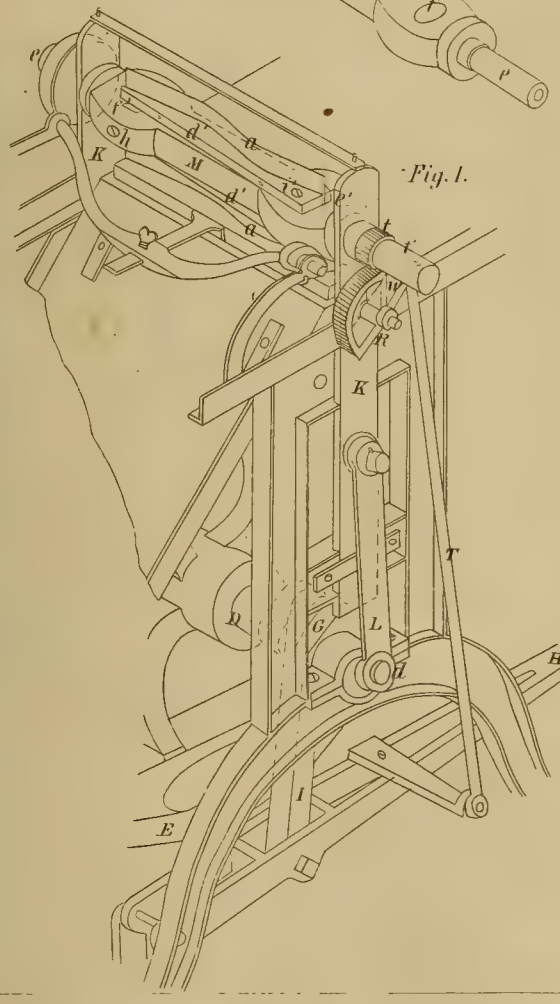

Fig. 1.

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Fig. 1.

Fig. 2.

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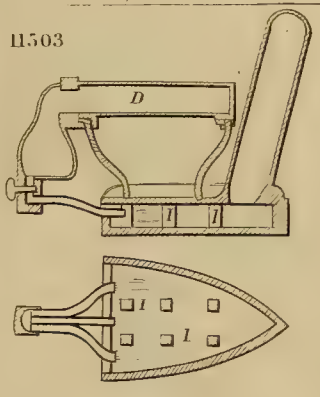

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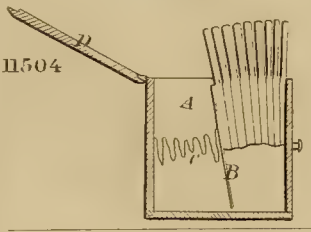

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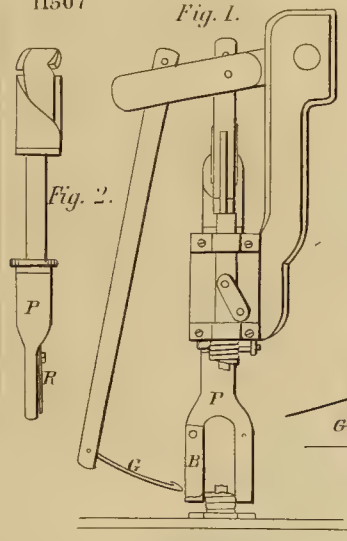

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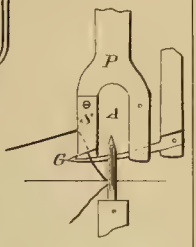

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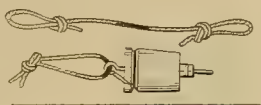

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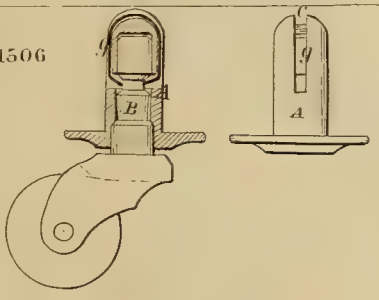

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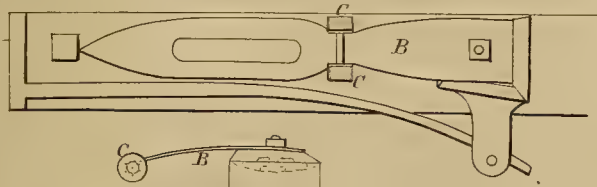
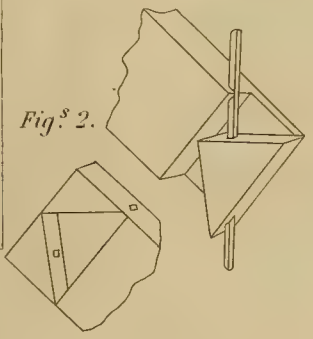


Fig. 2.

Figs. 2.



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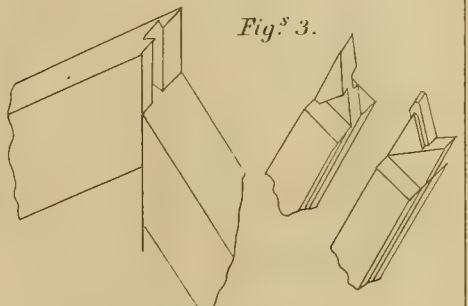

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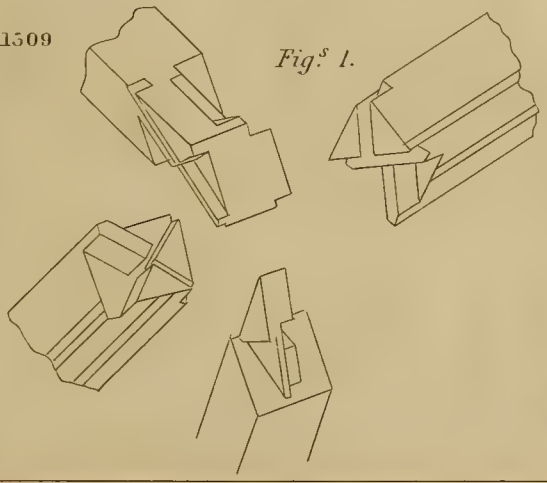

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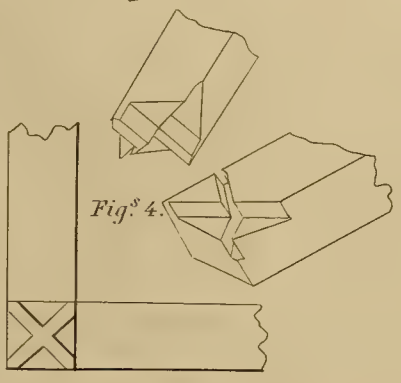

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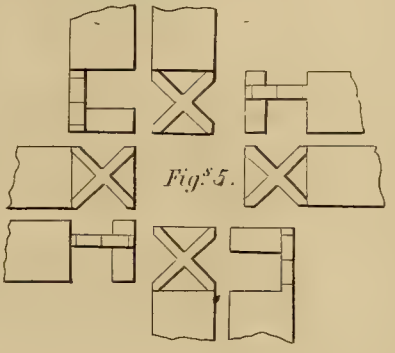

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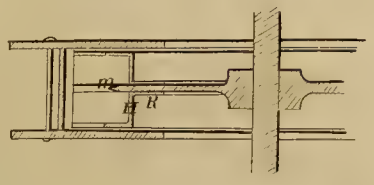

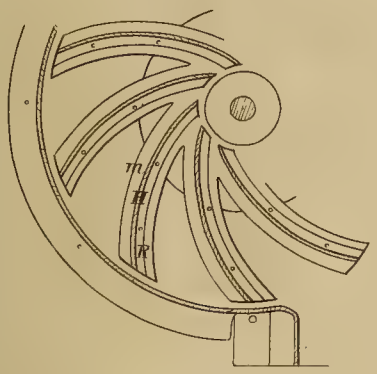

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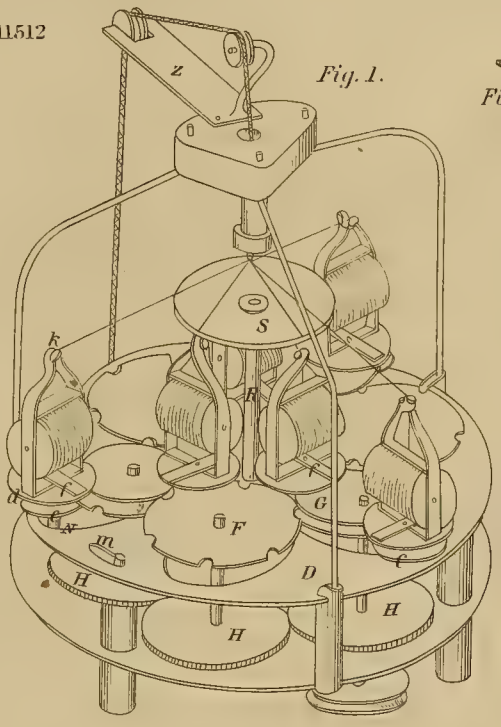

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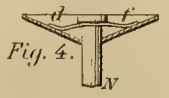

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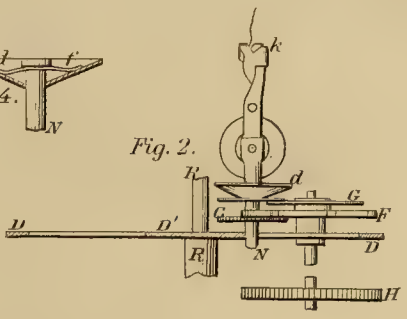

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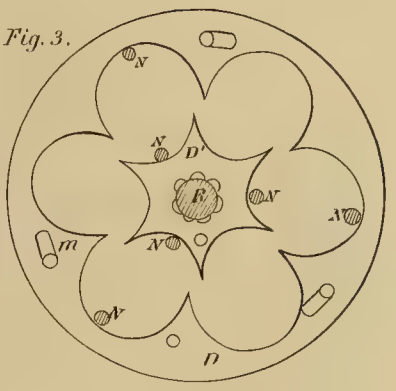

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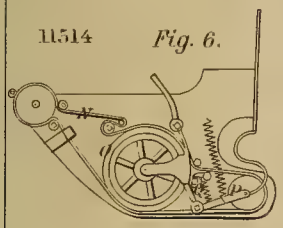

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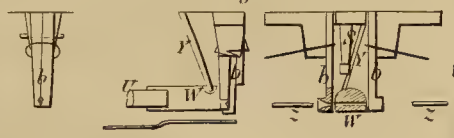

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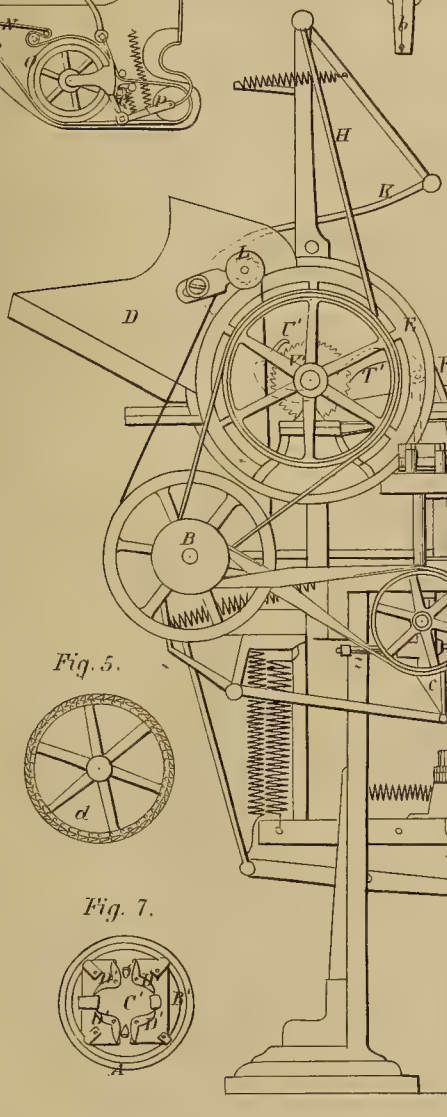

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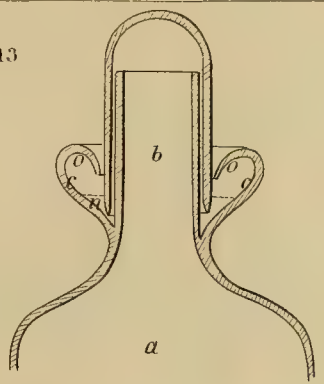

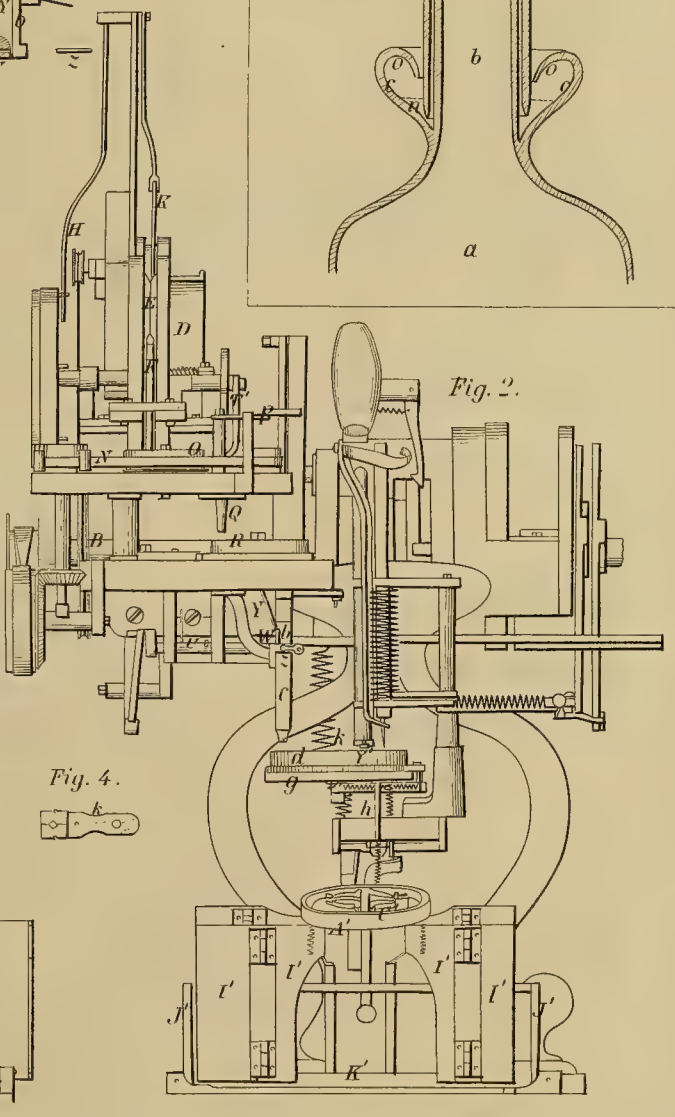

Fig. 2.

Fig. 5.

Fig. 4.

Fig. 7.

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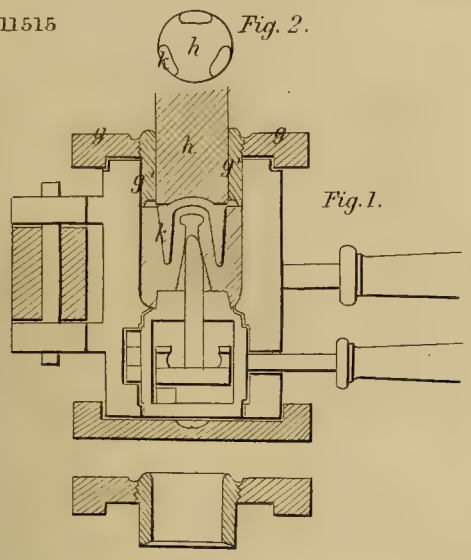

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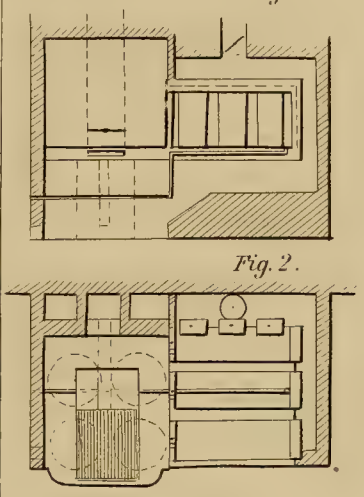

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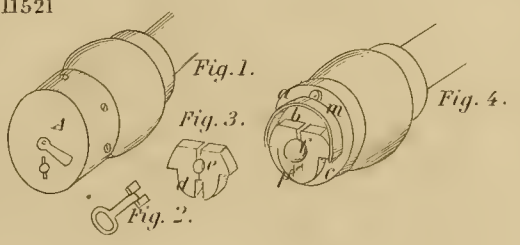

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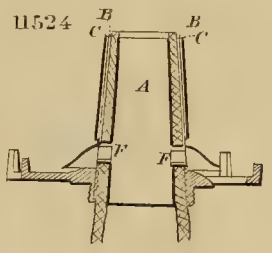

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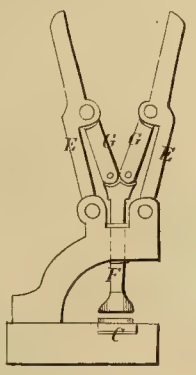

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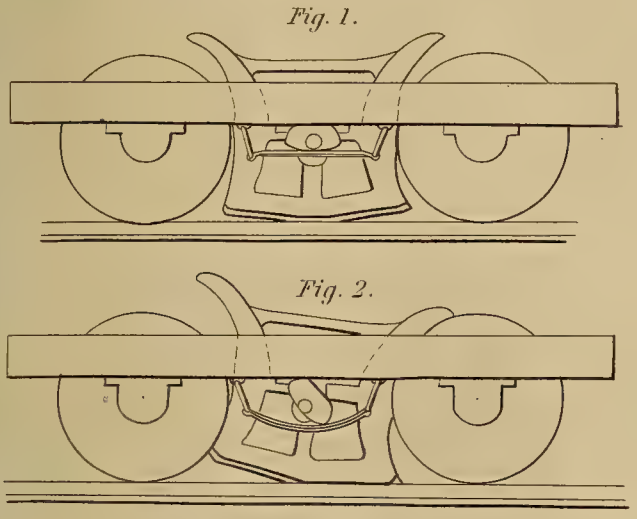

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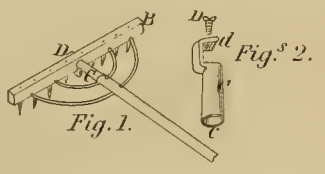

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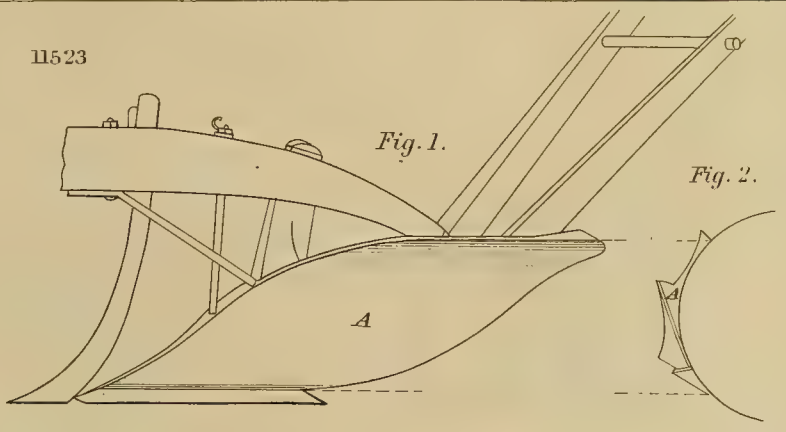

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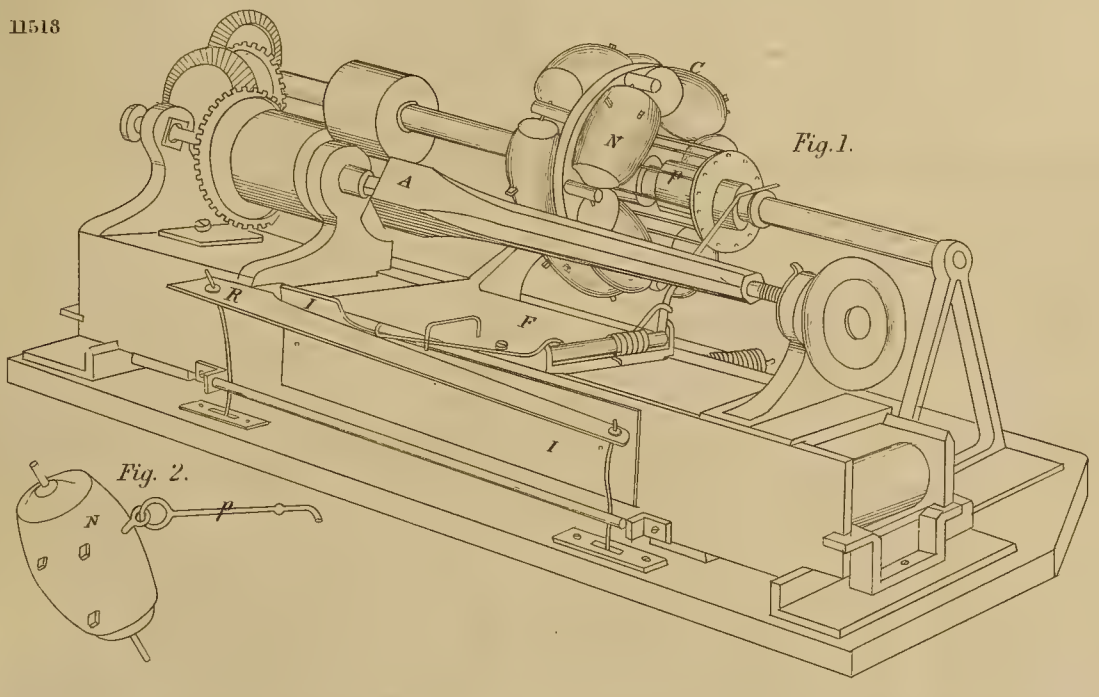

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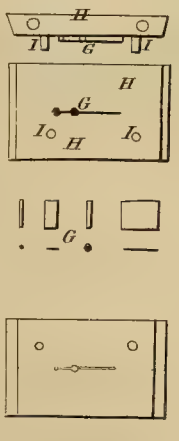

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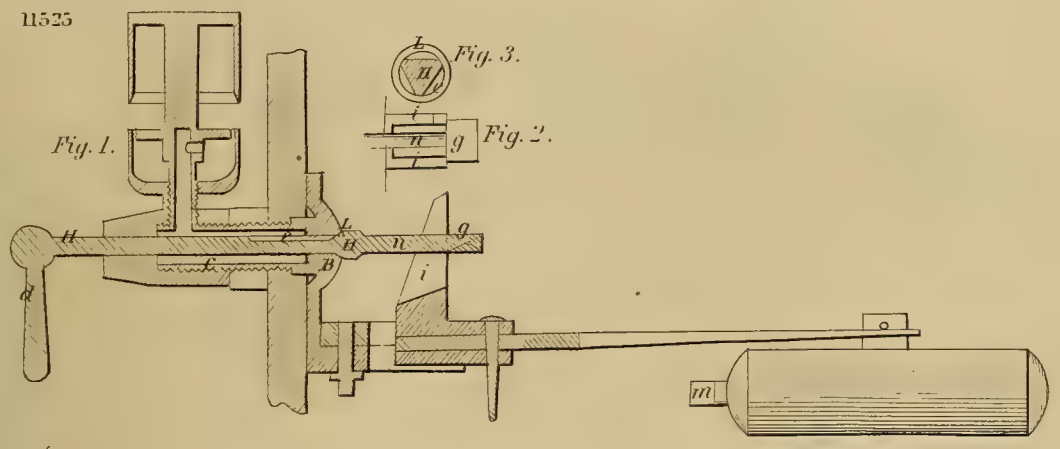

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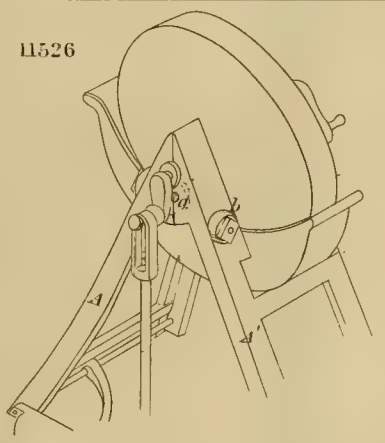

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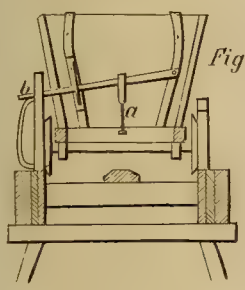

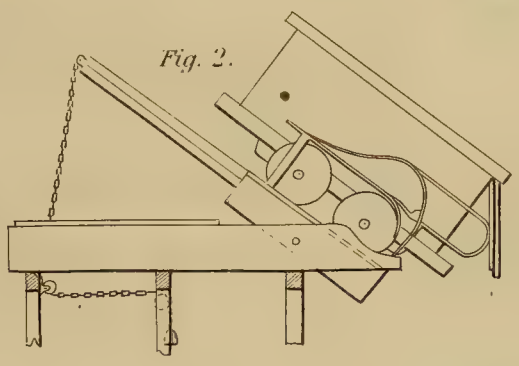

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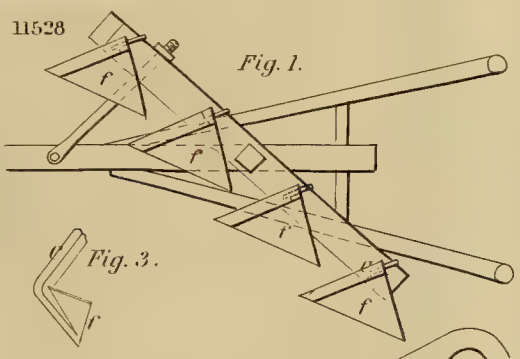

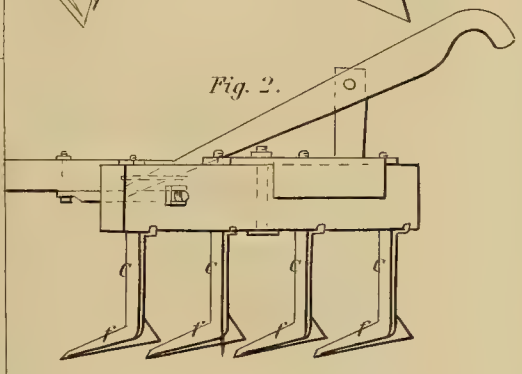

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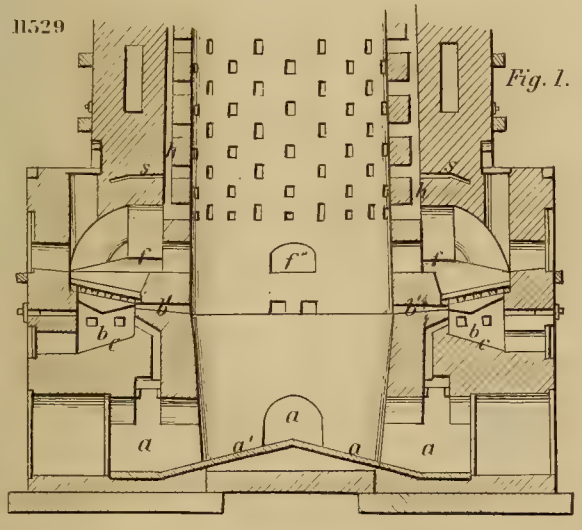

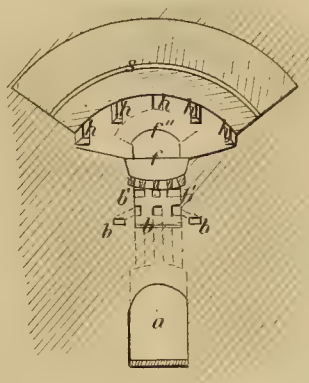

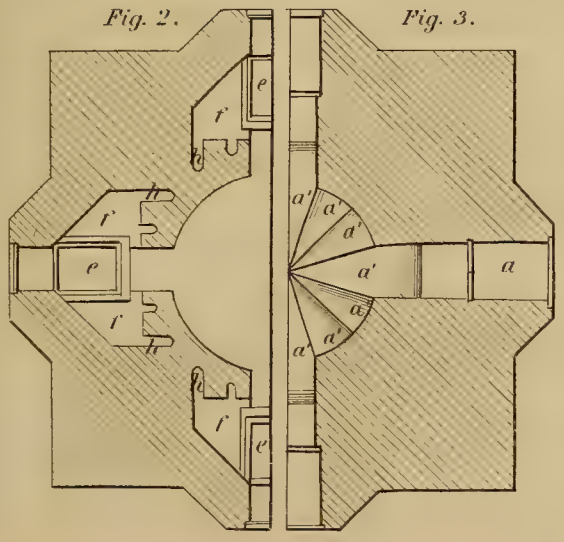

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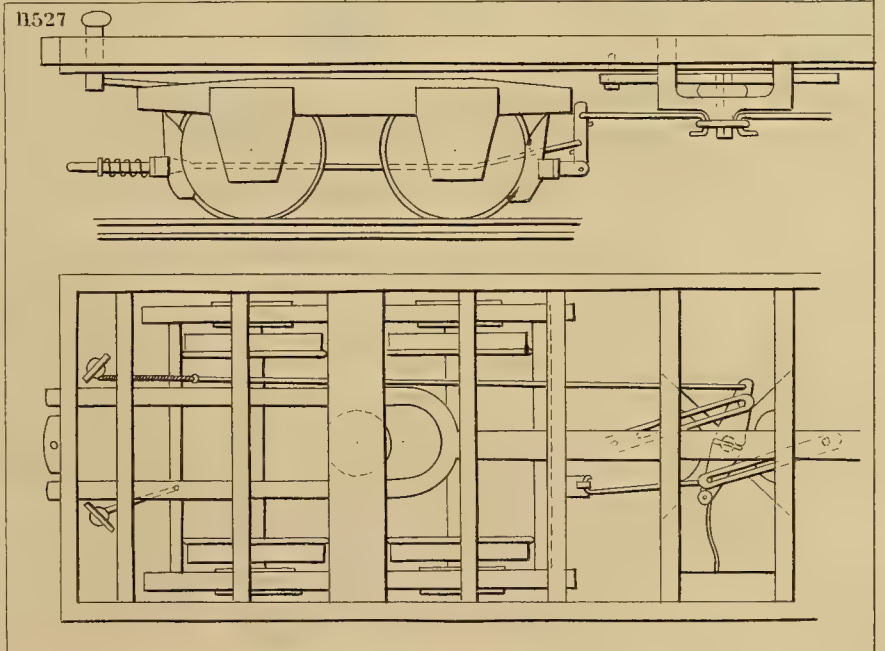

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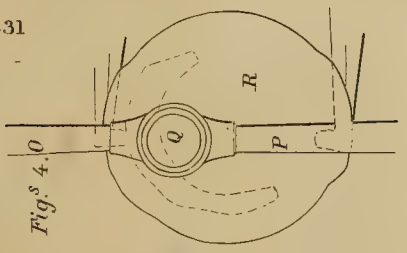
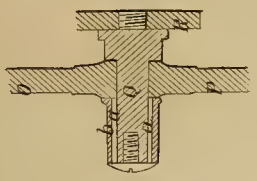
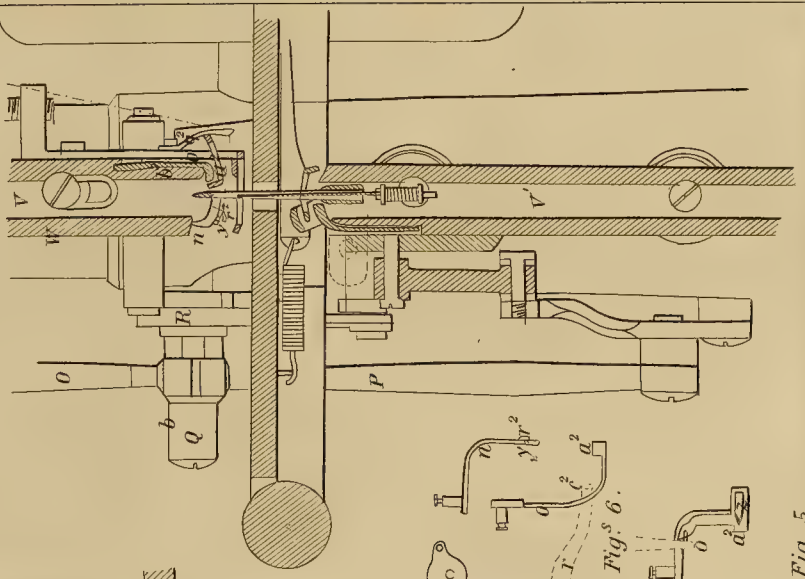


Figs. 4.





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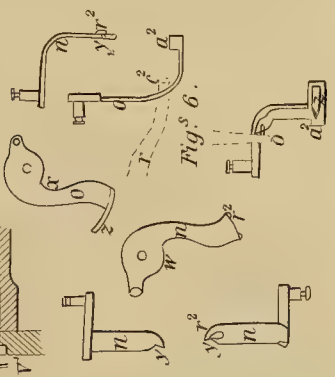

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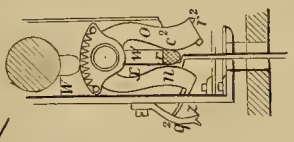

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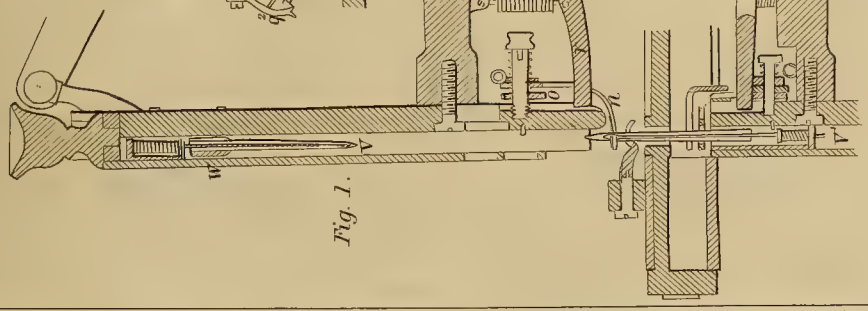

Fig. 1.

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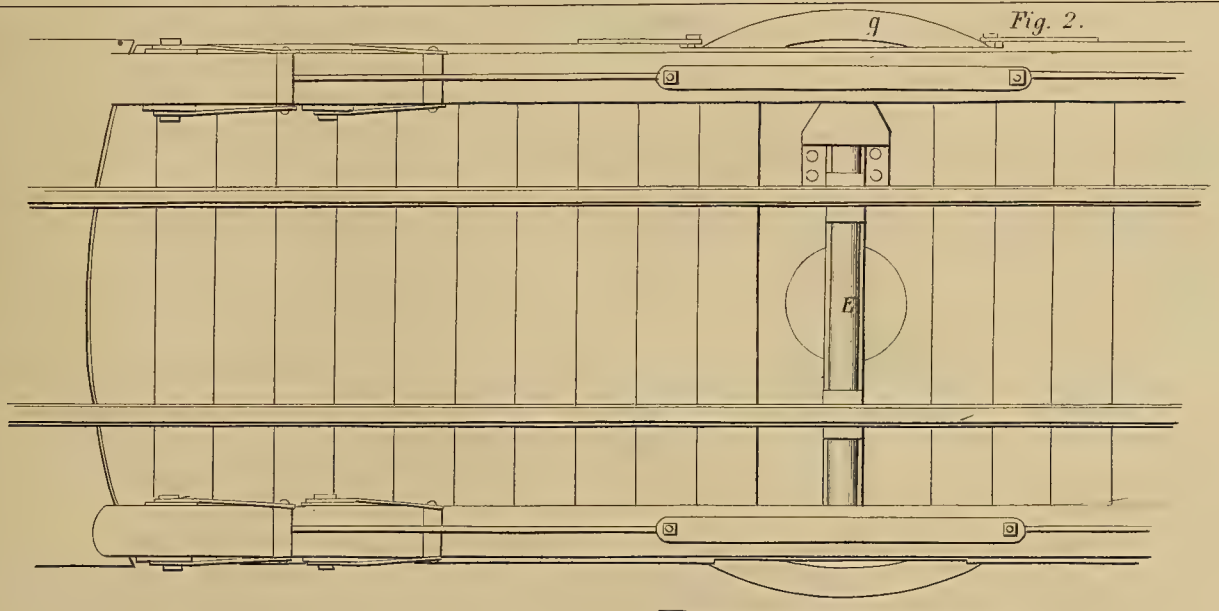

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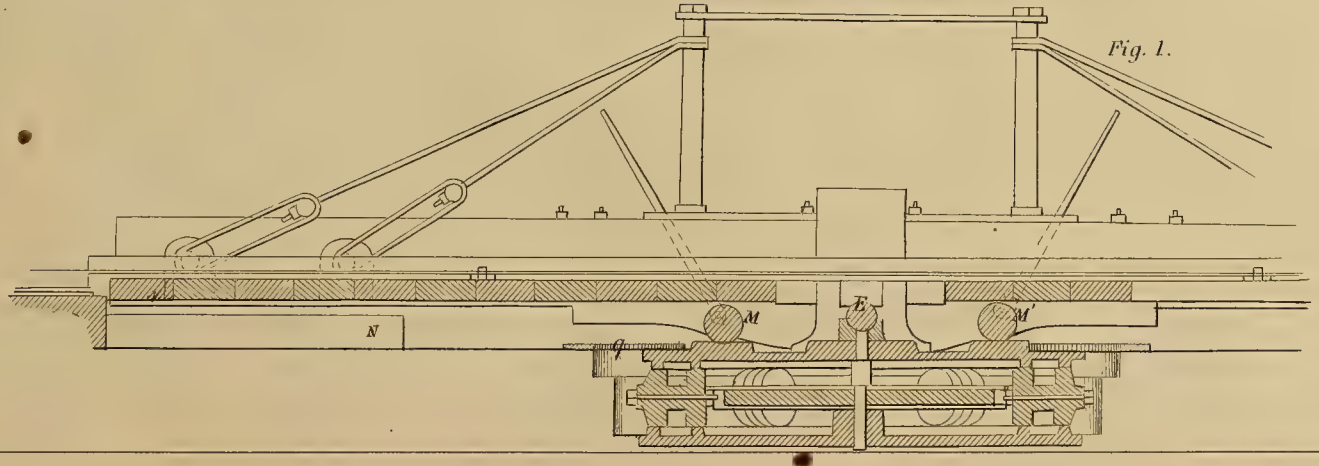

Fig. 1.

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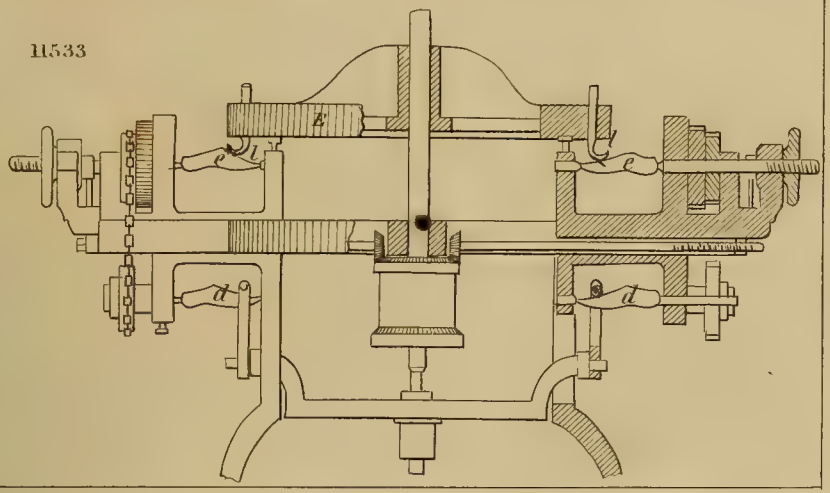

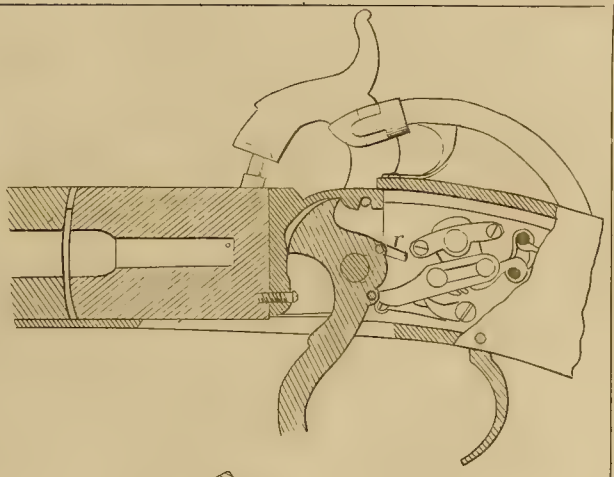

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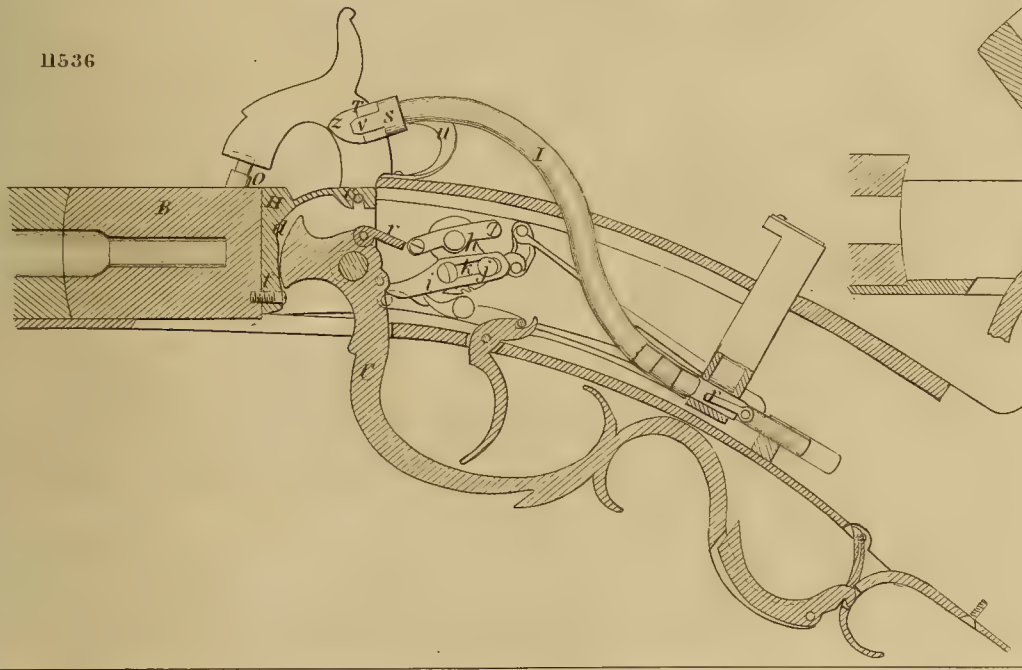

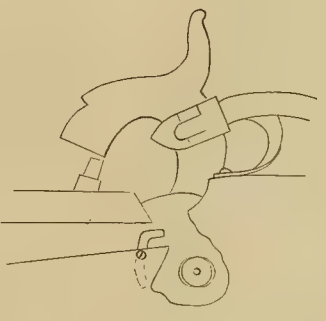

11534 Fig. 2.

Fig. 1.

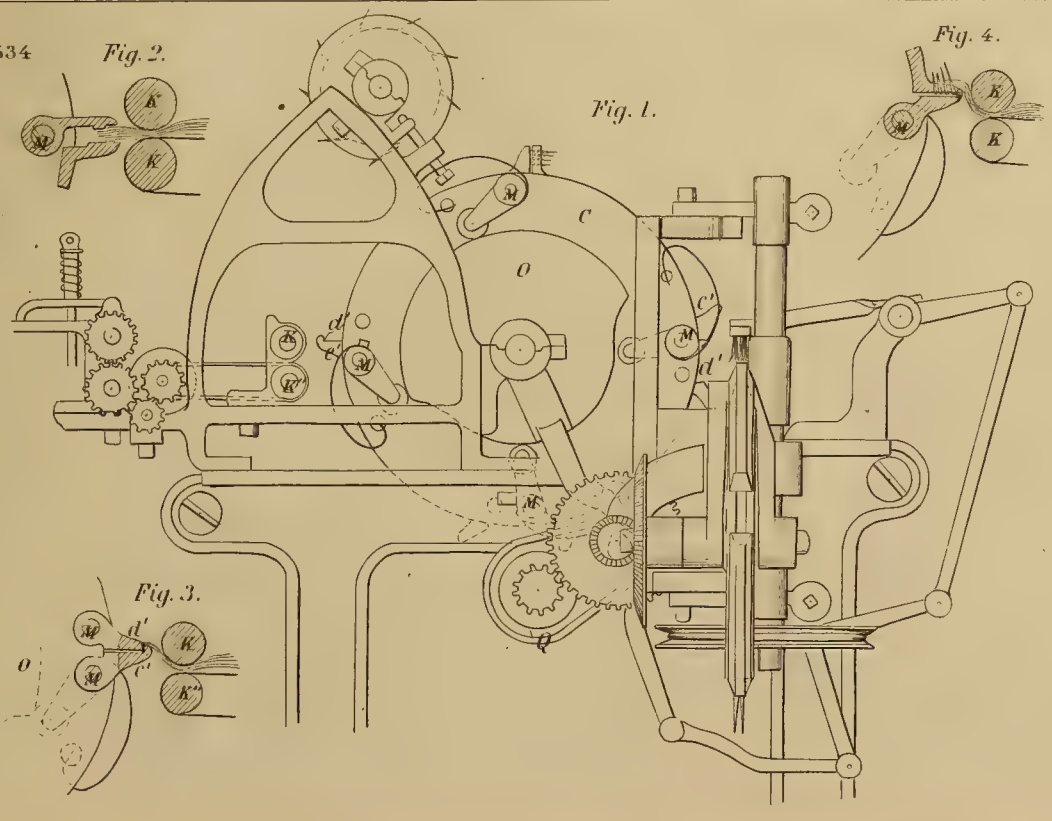

Fig. 4.

Fig. 3.

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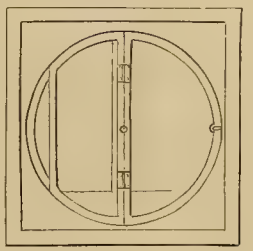

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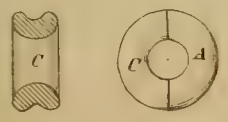

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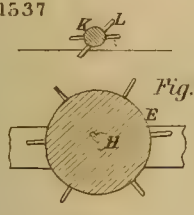

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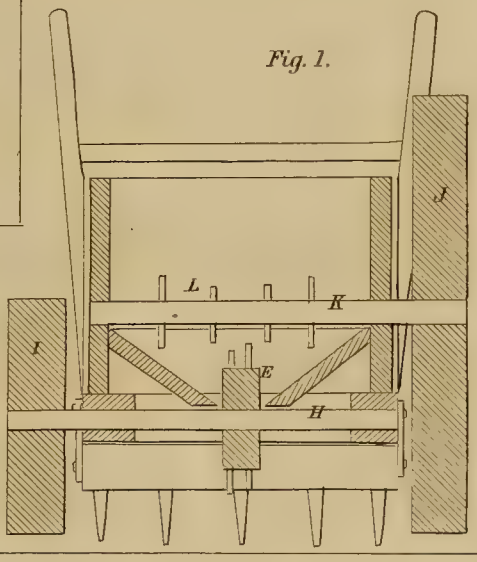

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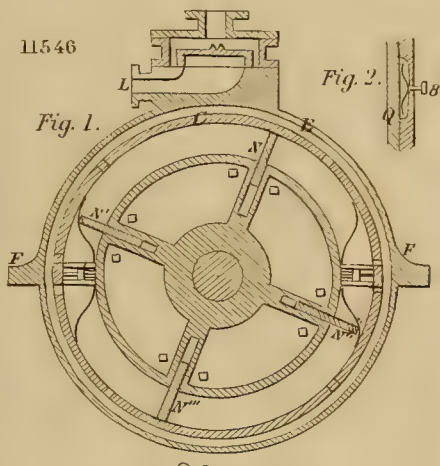

Fig. 1.

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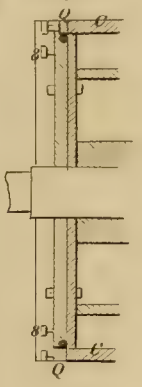

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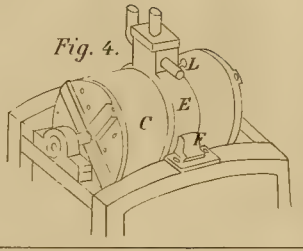

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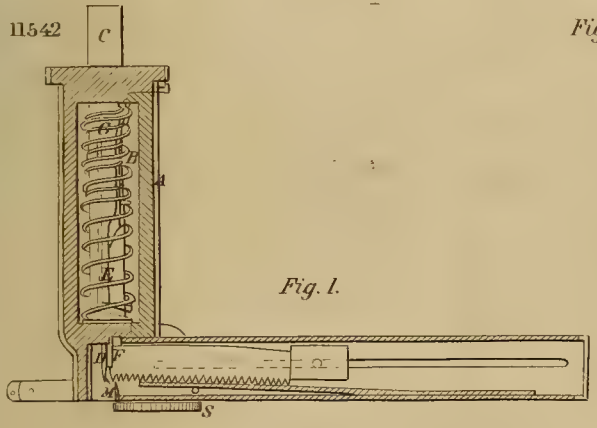
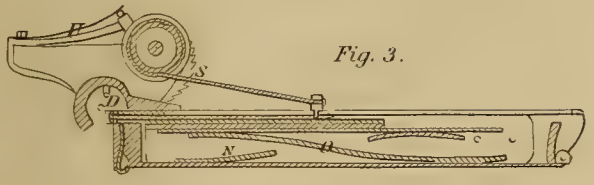


Fig. 1.

Fig. 4.



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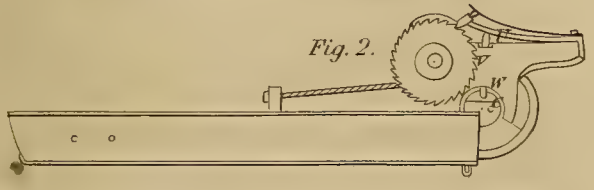

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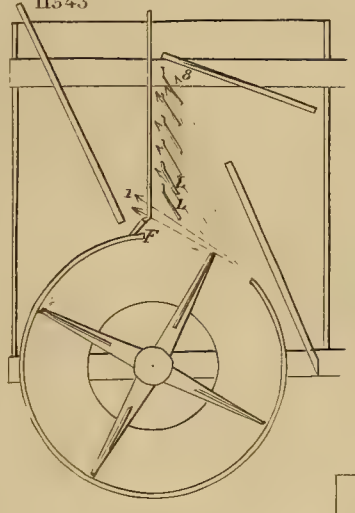

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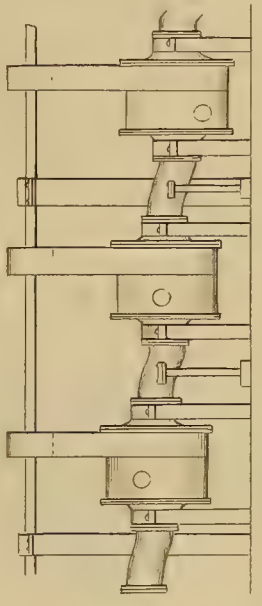

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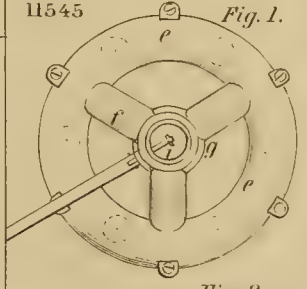

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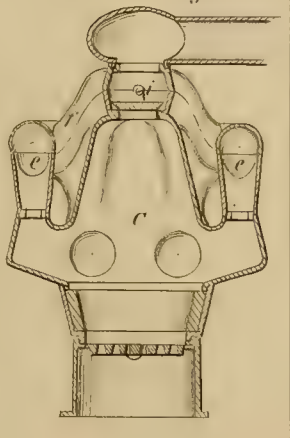

Fig. 2.

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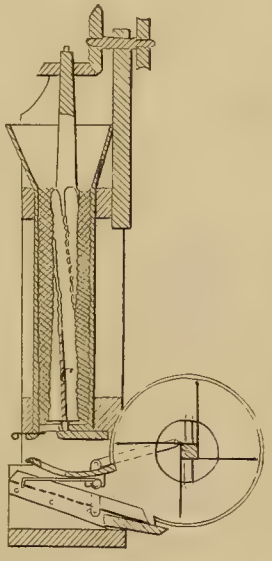

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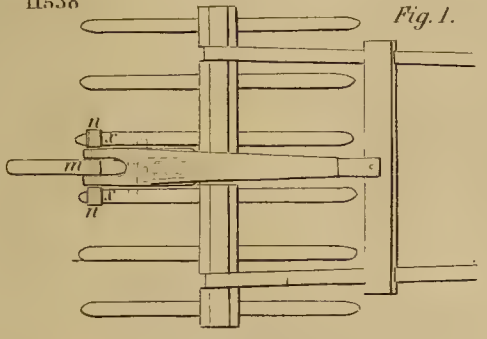

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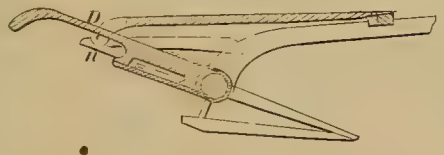

Fig. 2.

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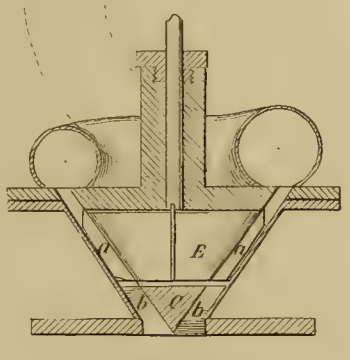

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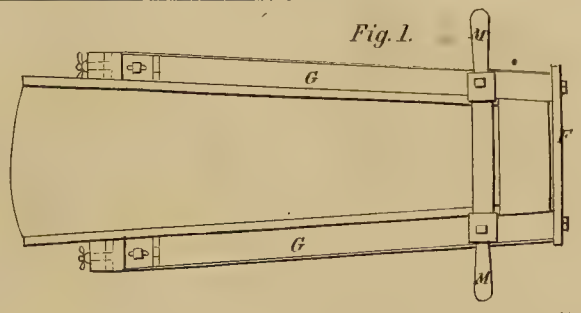

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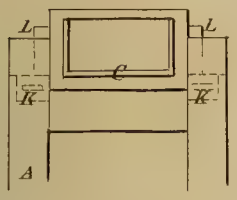

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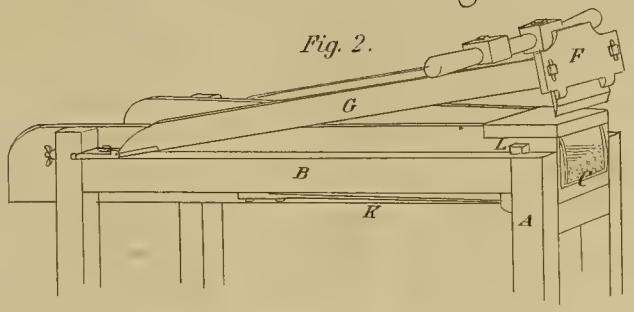

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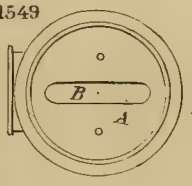
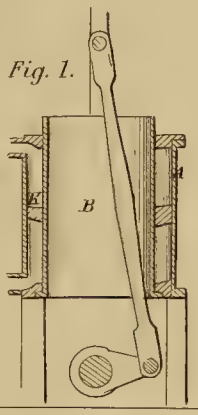


Fig. 3.

Fig. 2.

Fig. 1.



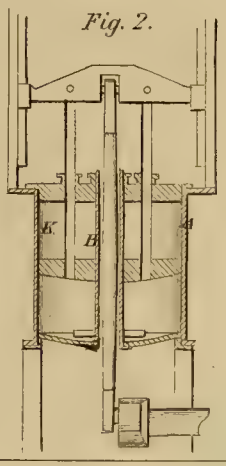


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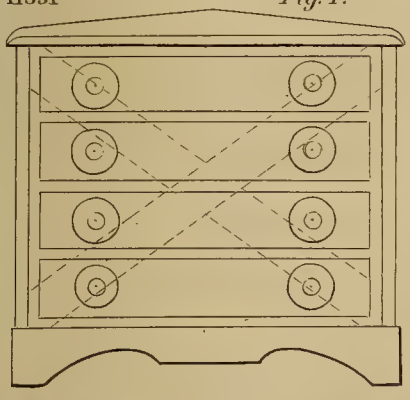
Fig. 1.



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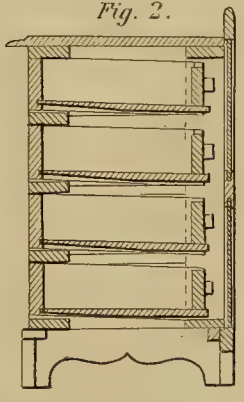

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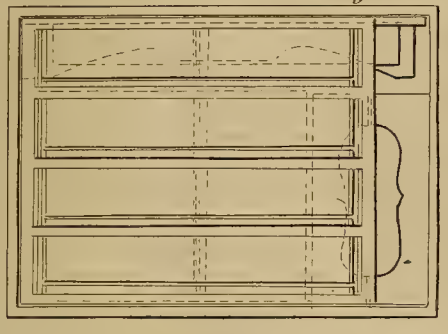

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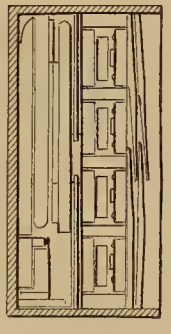

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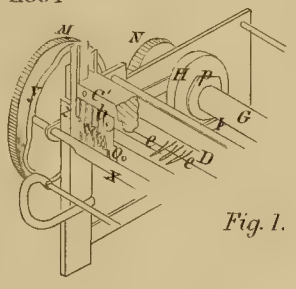

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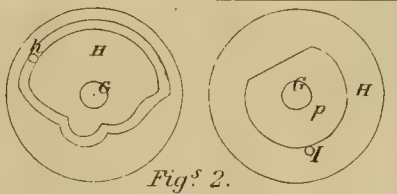

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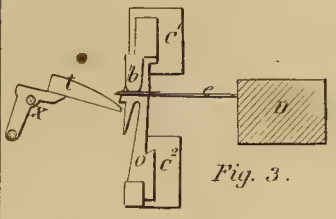

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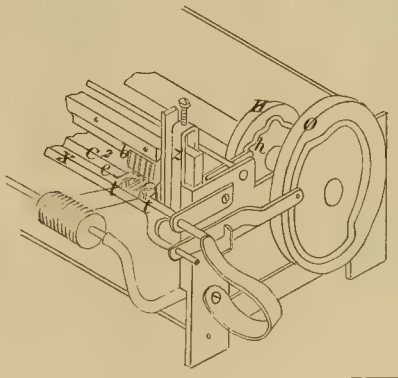

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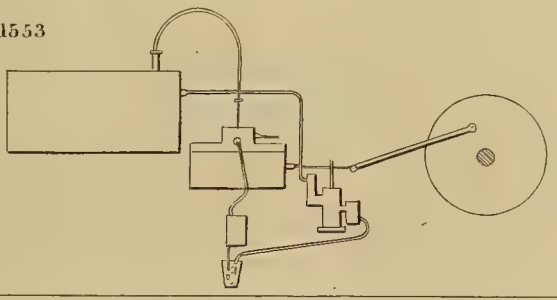

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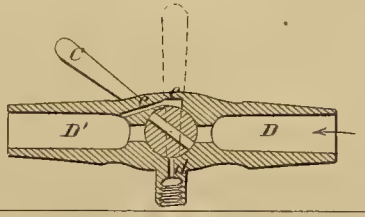

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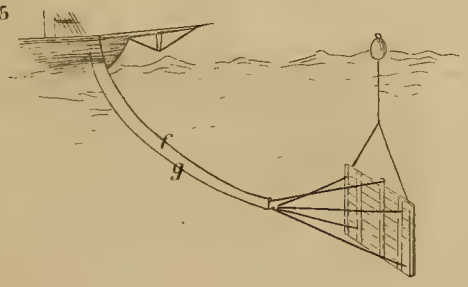

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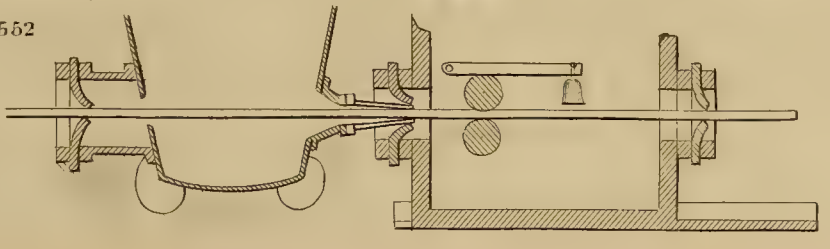

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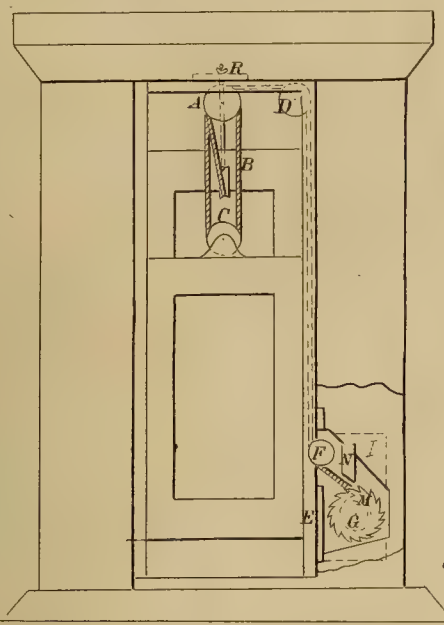

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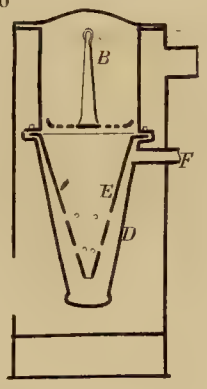

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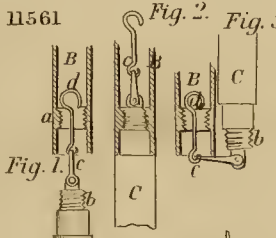

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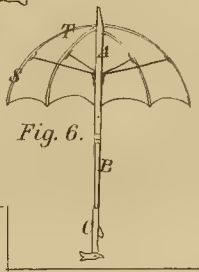

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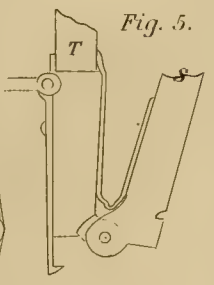

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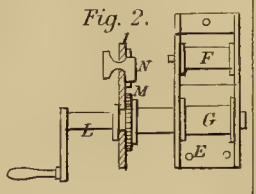

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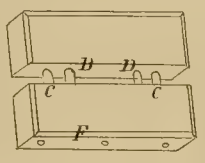

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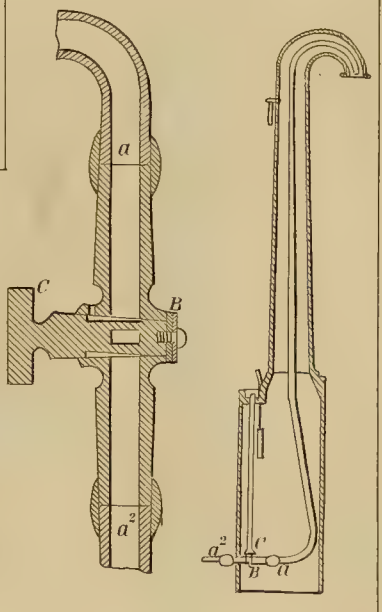

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Fig. 2.

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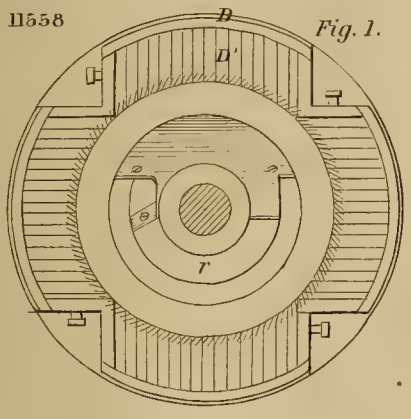

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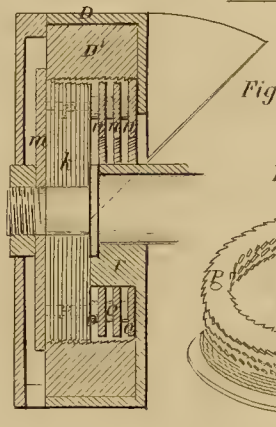

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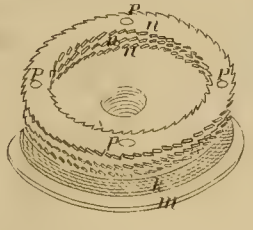

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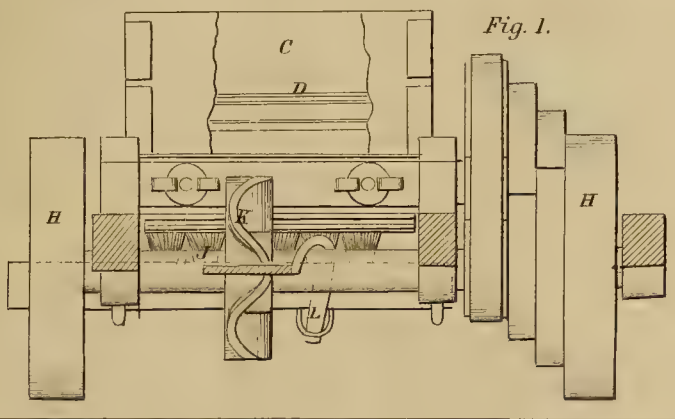

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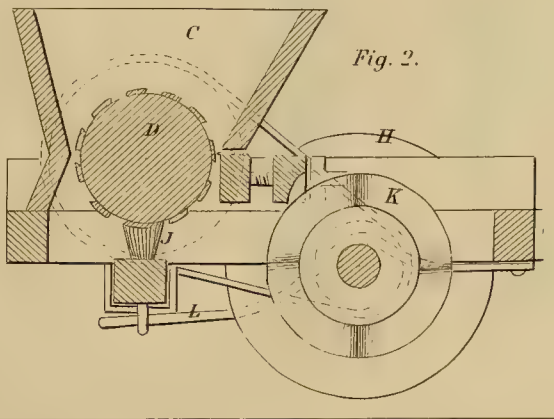

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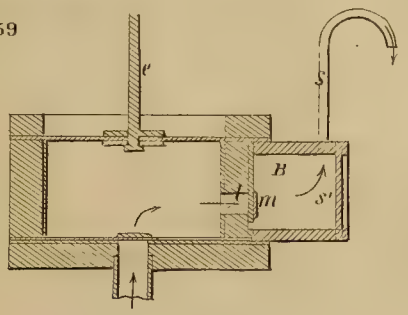

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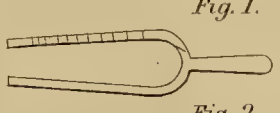

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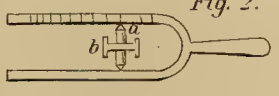

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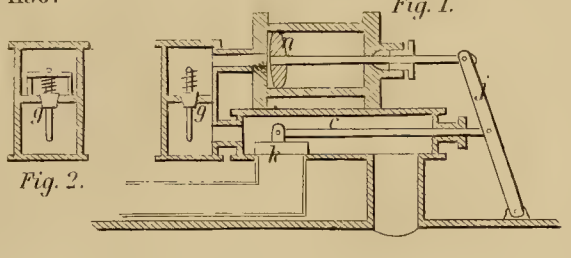

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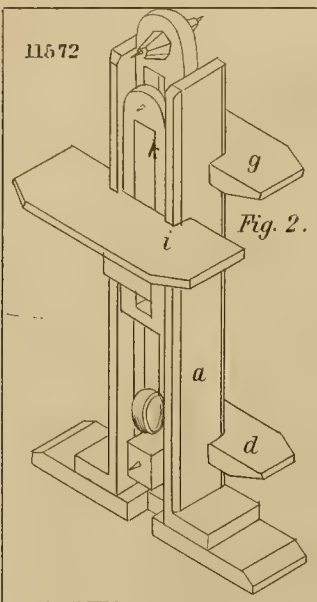

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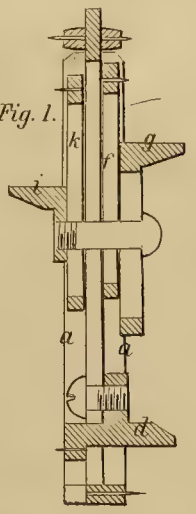

Fig. 2.

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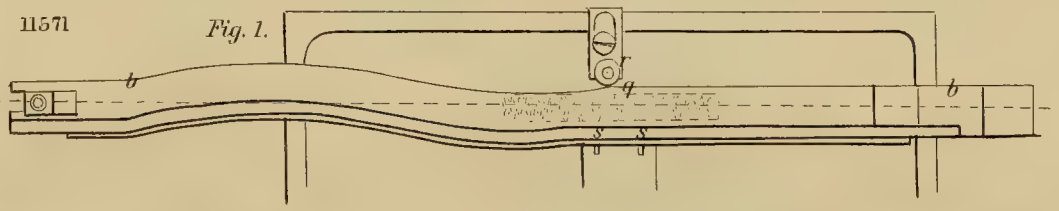

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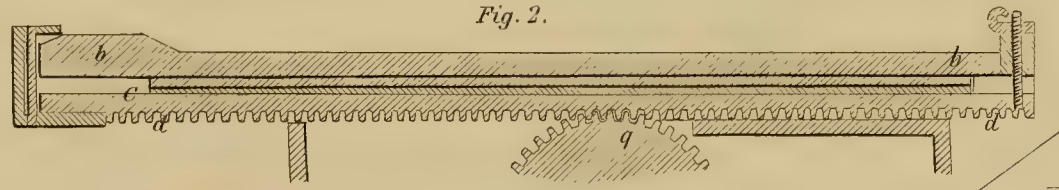

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Fig. 2.

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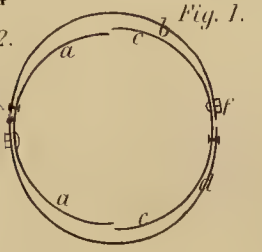

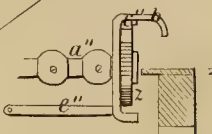

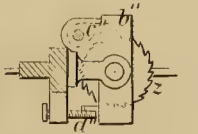

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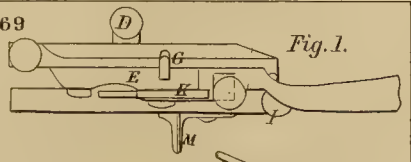

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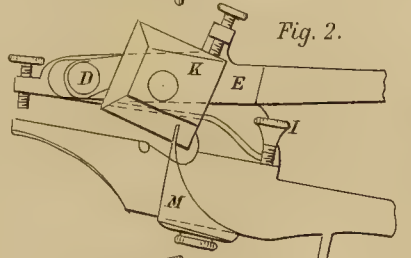

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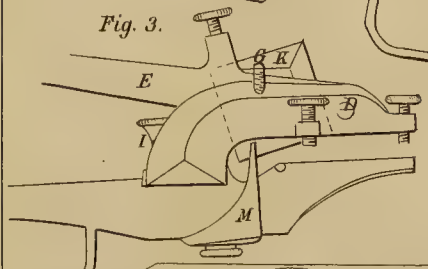

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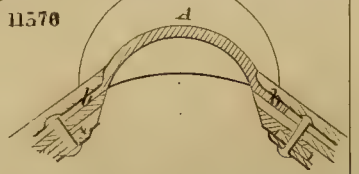

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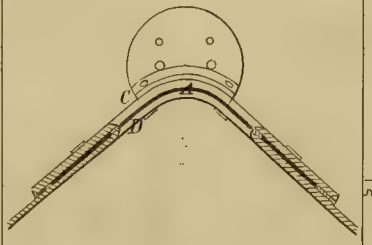

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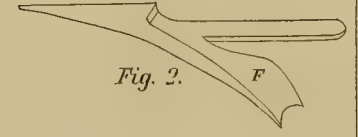

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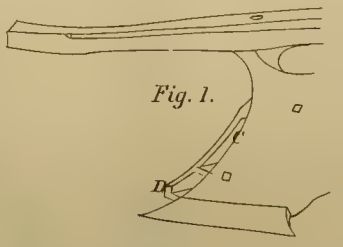

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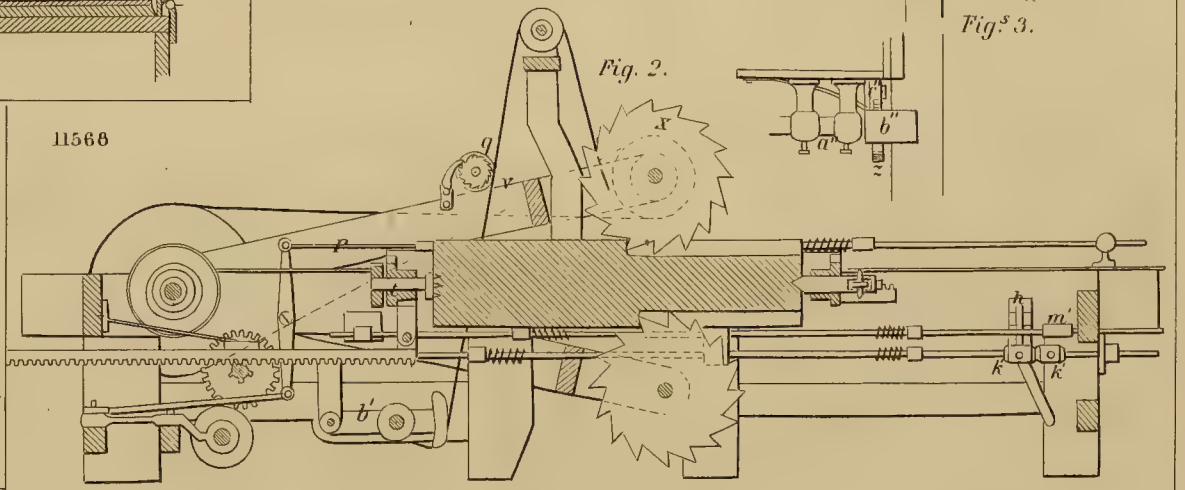

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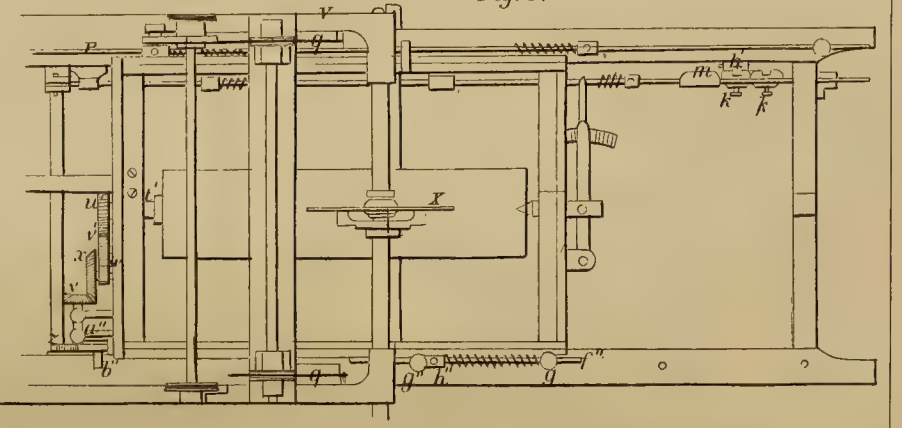

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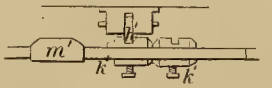

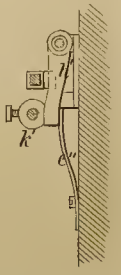

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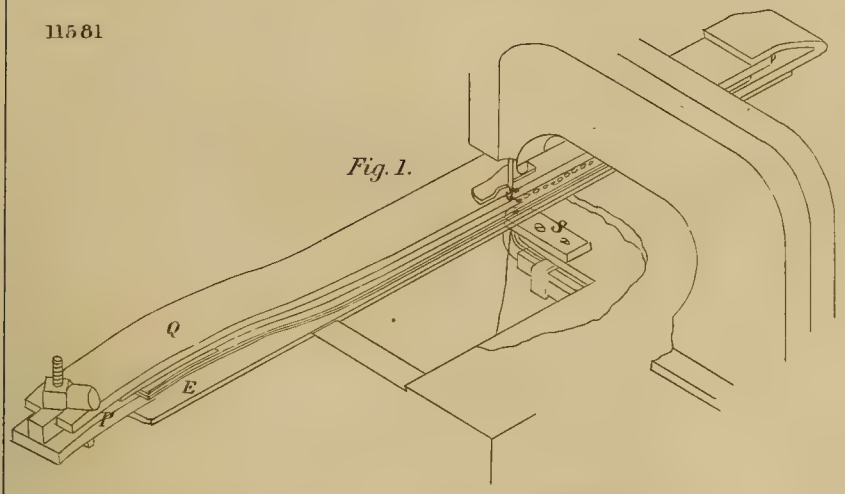

Fig. 2.

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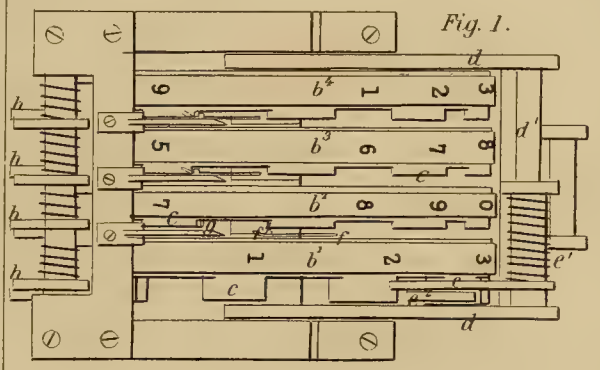

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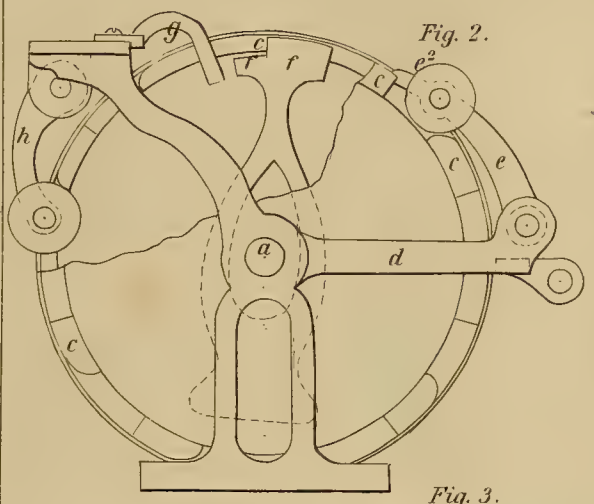

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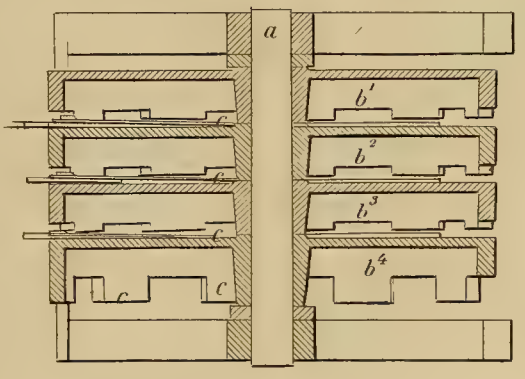

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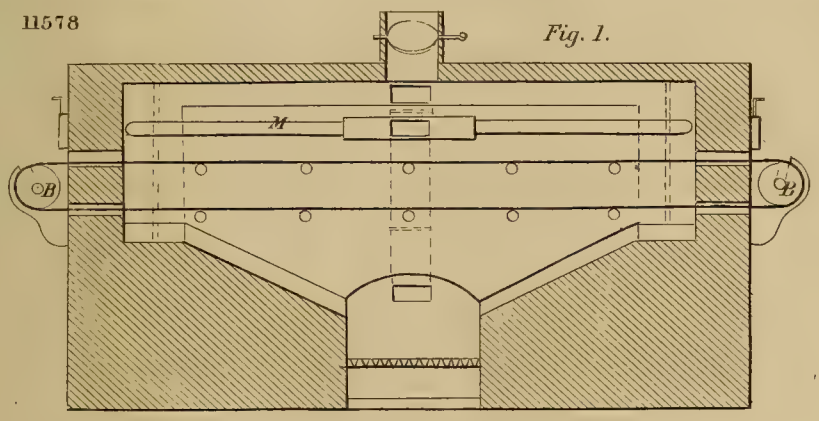

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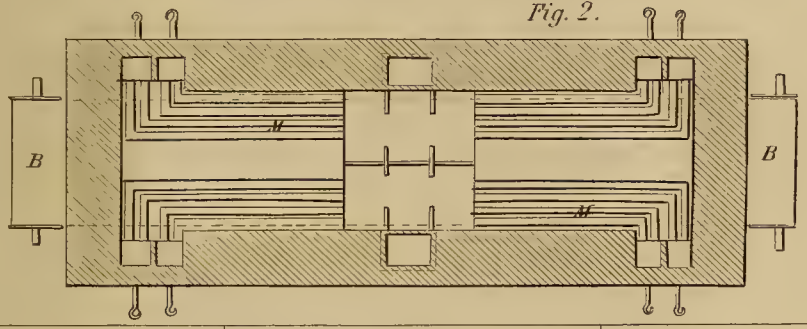

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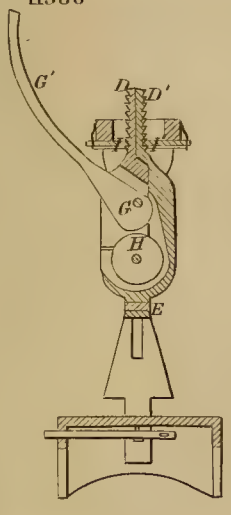

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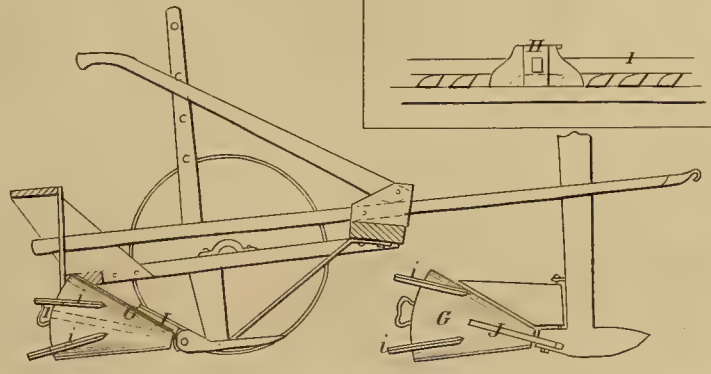

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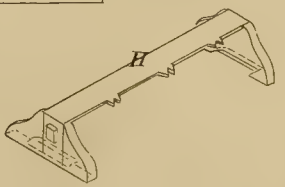

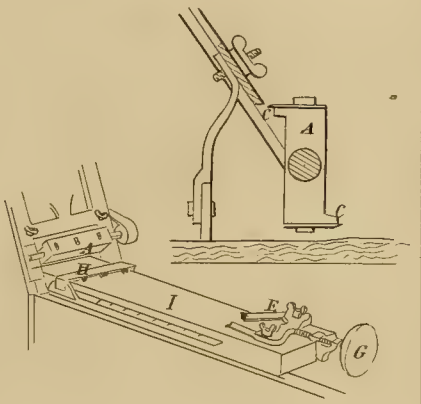

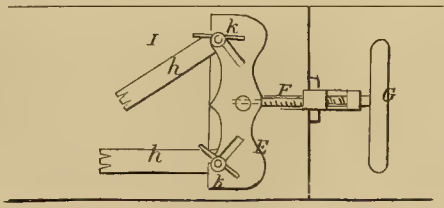

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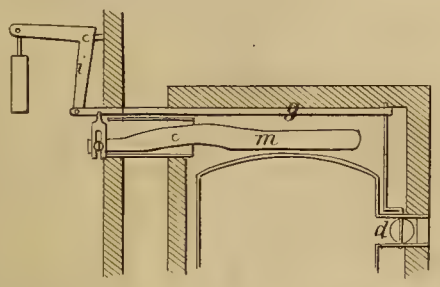

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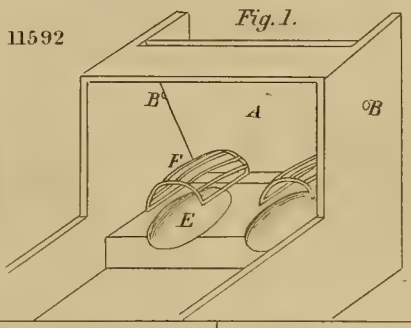

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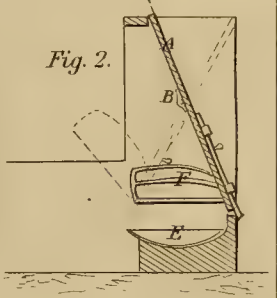

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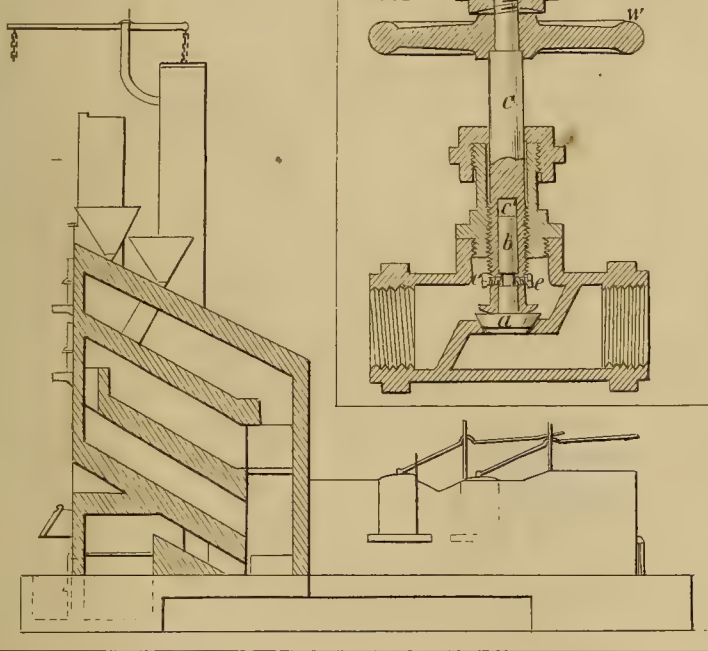

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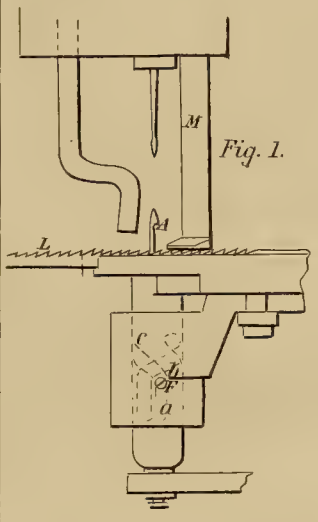

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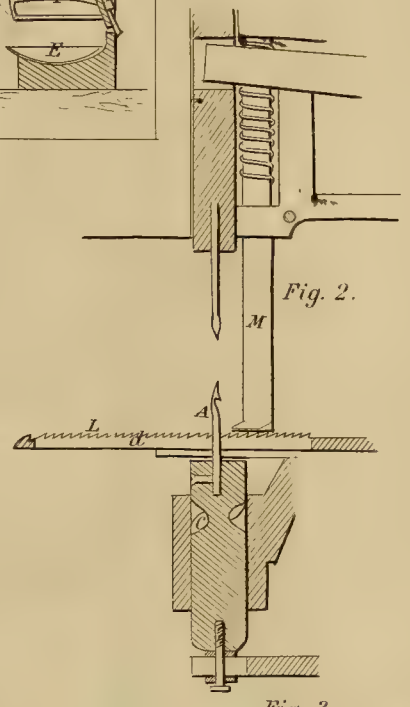

Fig. 2.

Fig. 3.

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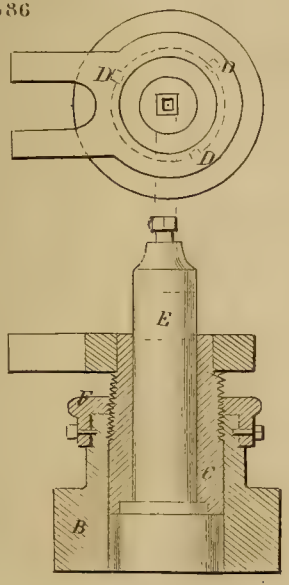

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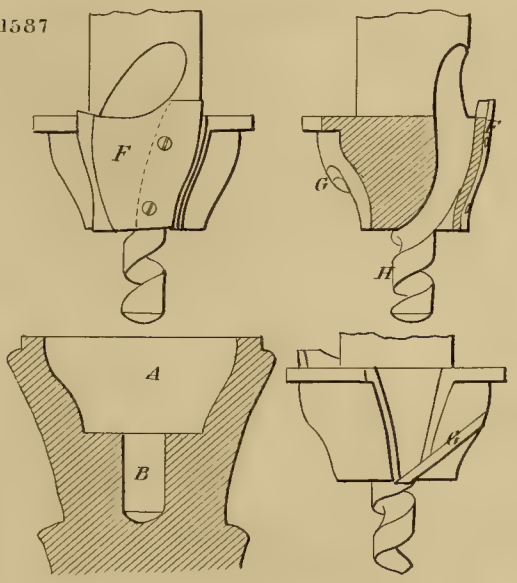

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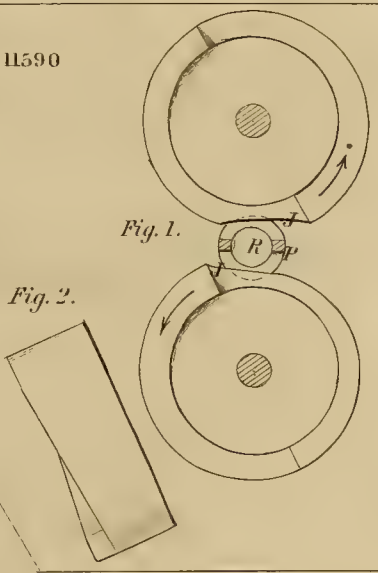

Fig. 1.

Fig. 2.

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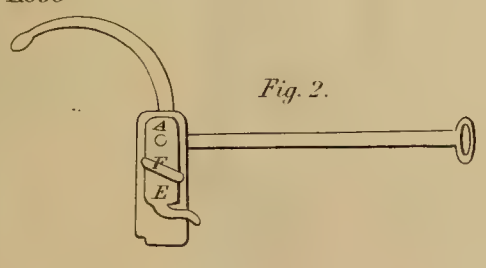

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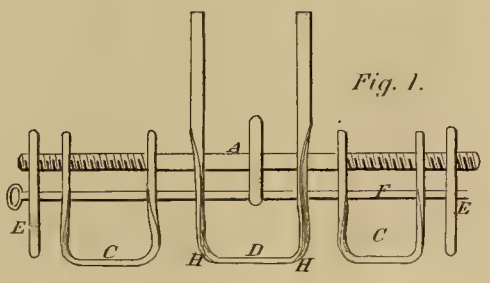

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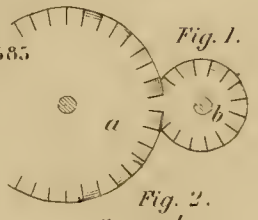

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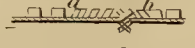

Fig. 3.

Fig. 4.

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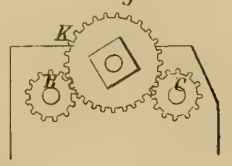

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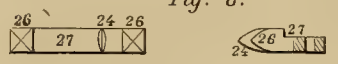

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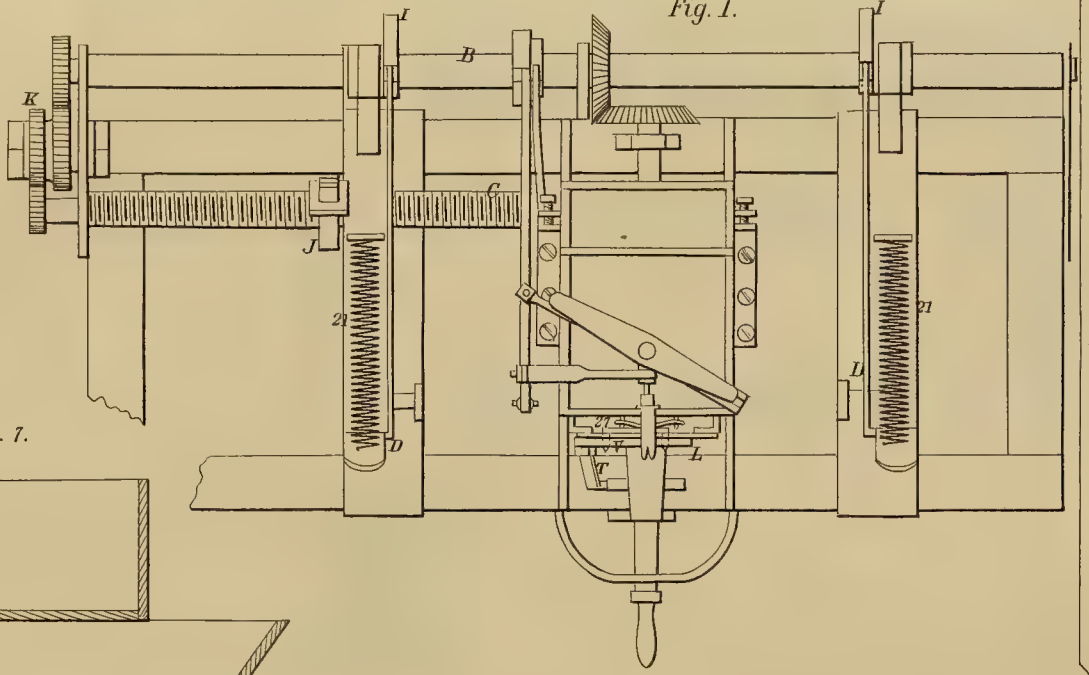

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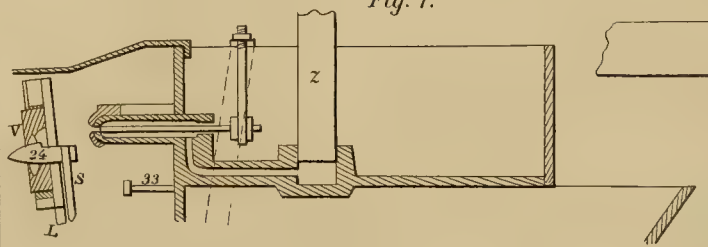

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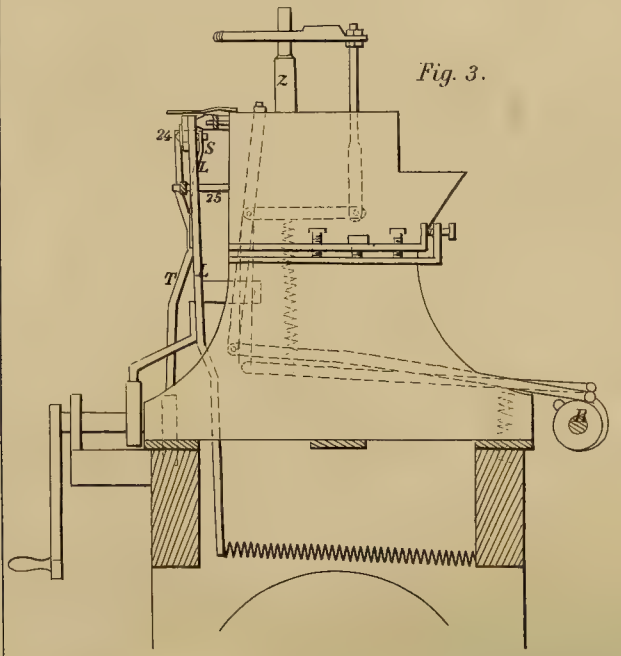

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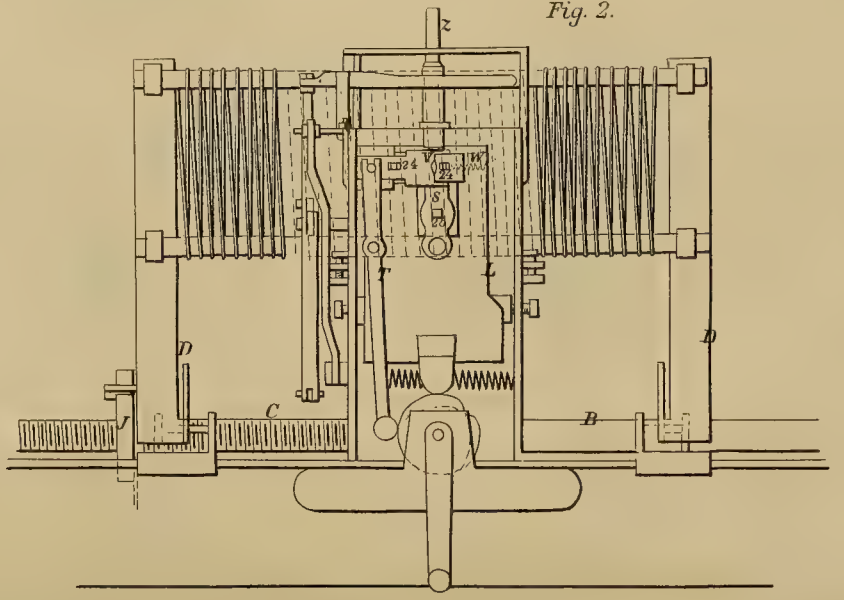

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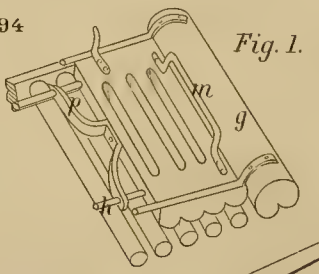

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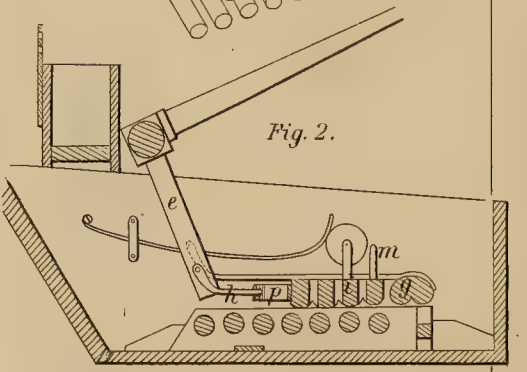

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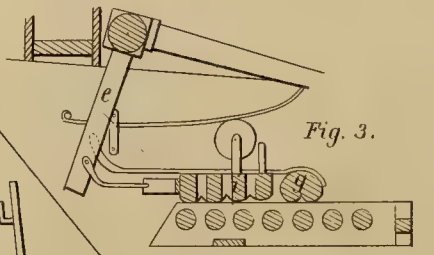

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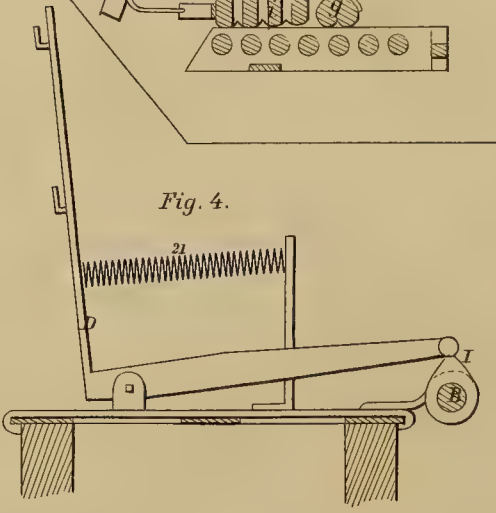

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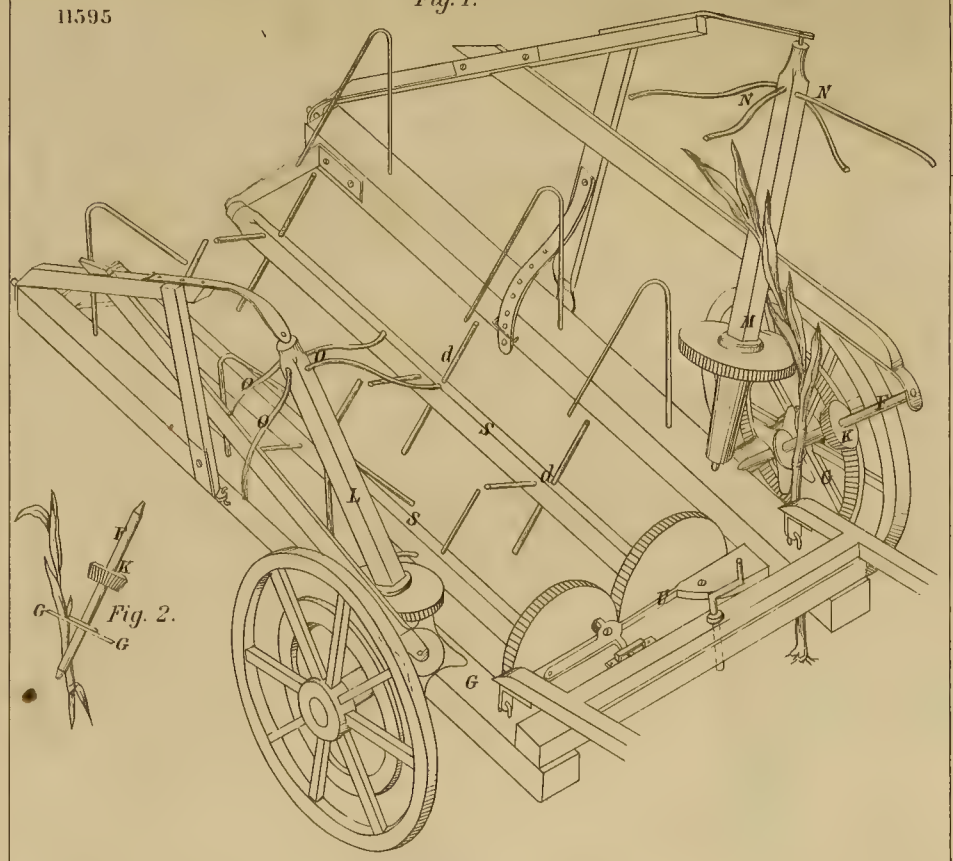

Fig. 2.

11597

Fig. 1.

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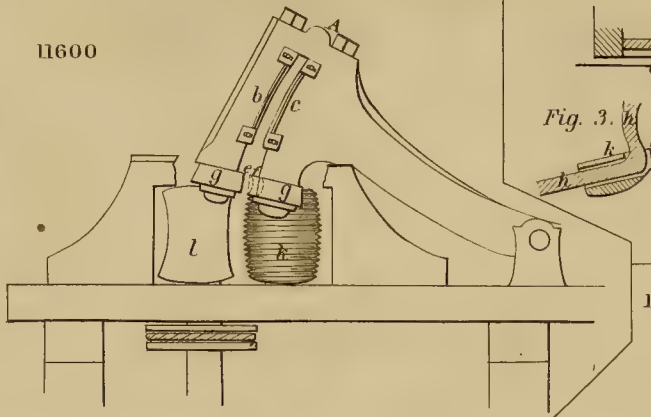

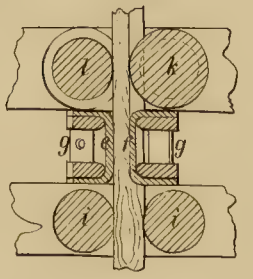

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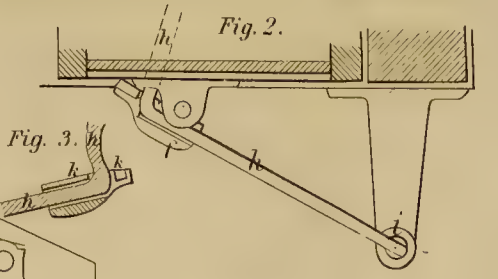

Fig. 3.

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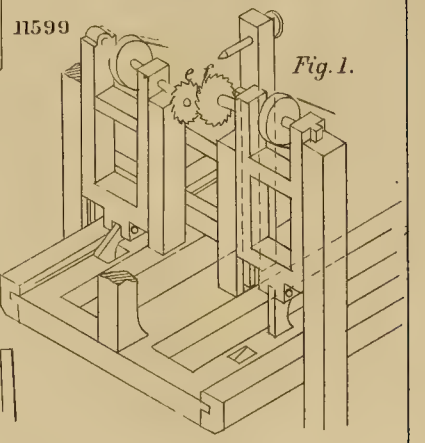

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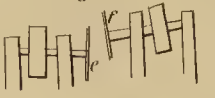

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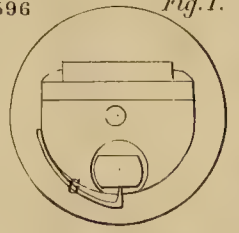

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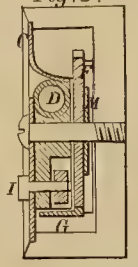

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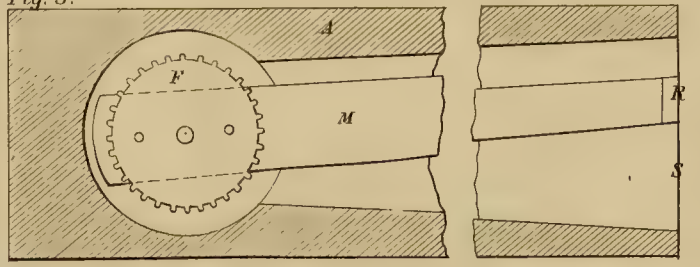

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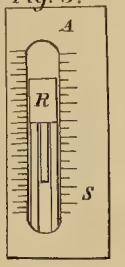

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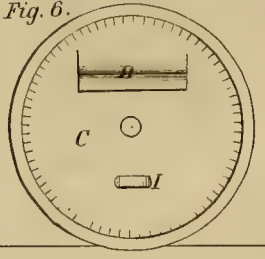

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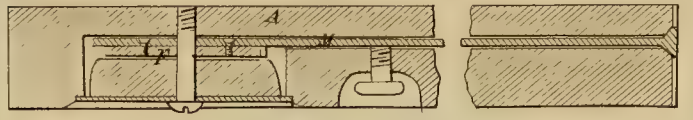

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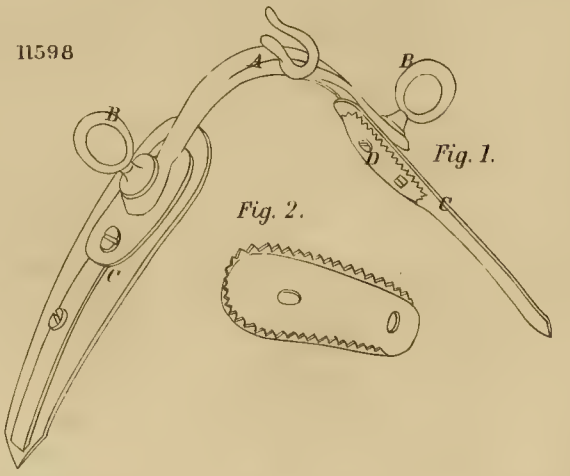

Fig. 1.

Fig. 2.

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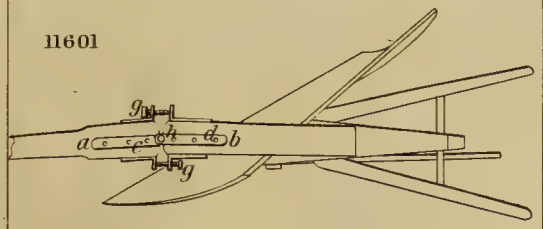

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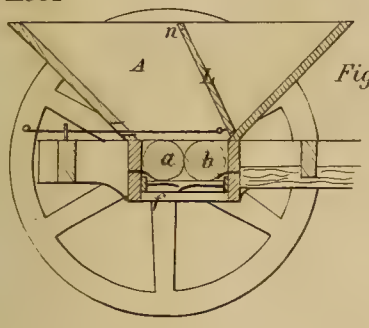

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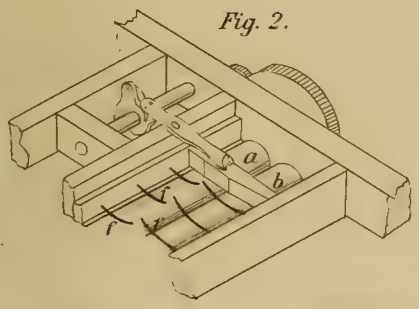

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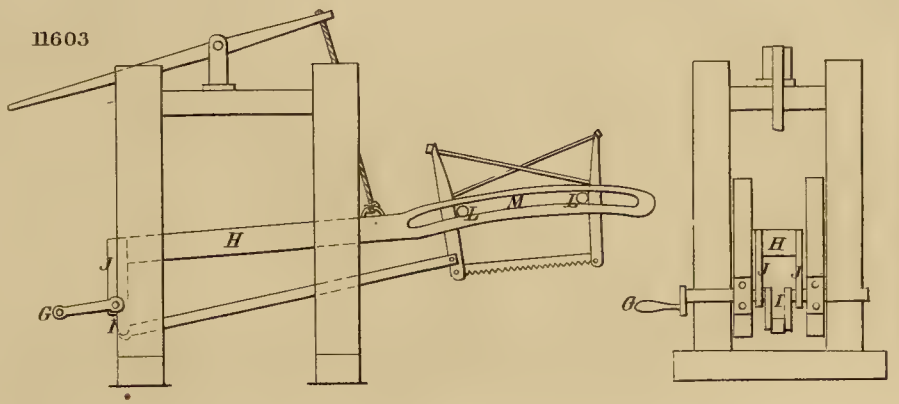

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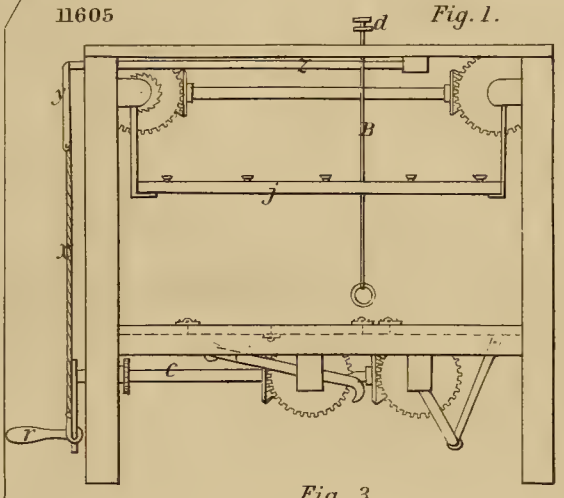

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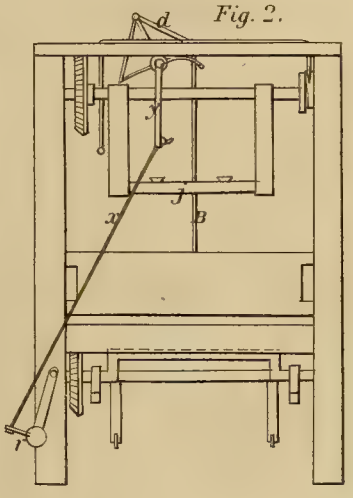

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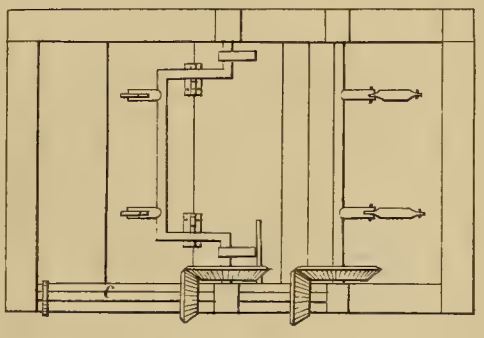

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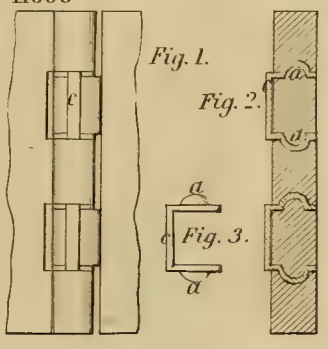

Fig. 1.

Fig. 2.

Fig. 3.

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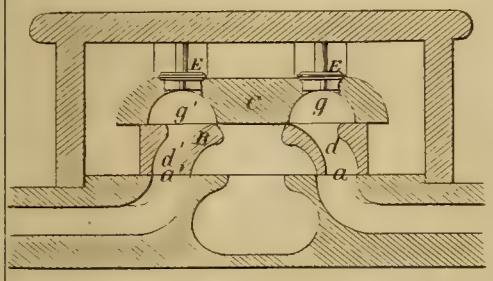

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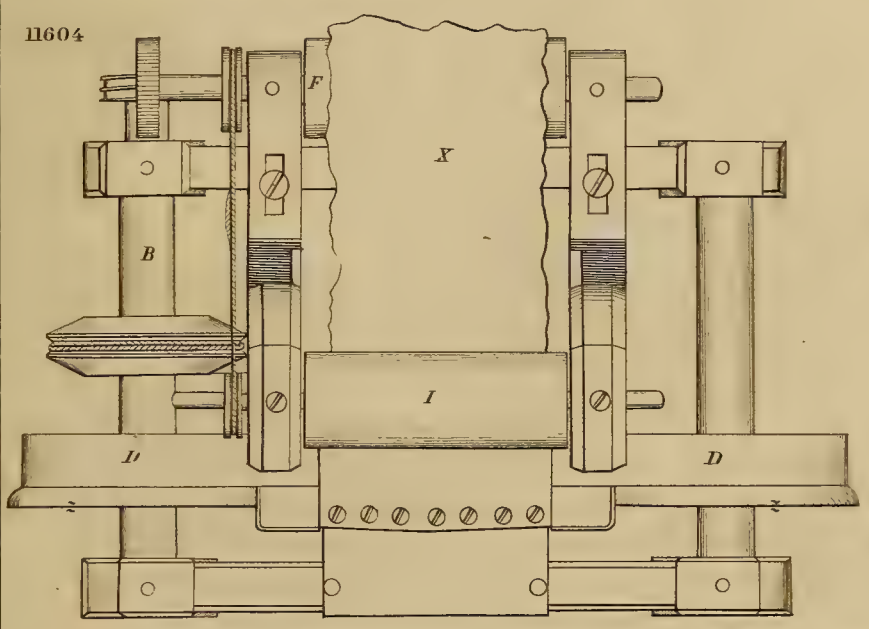

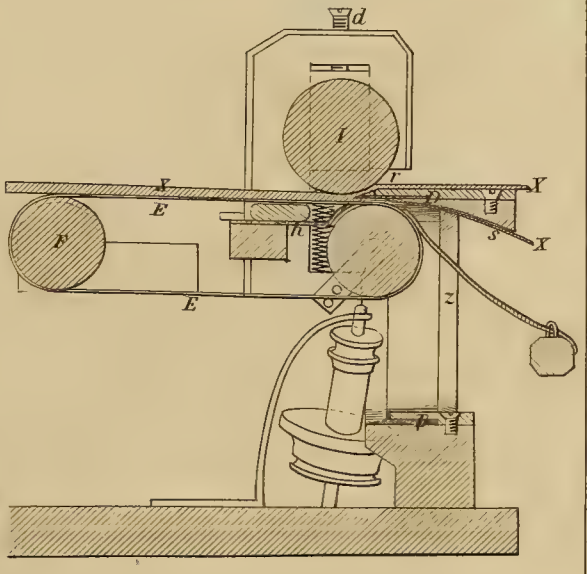

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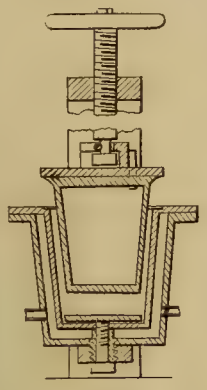

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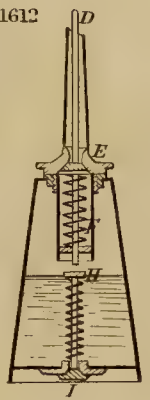

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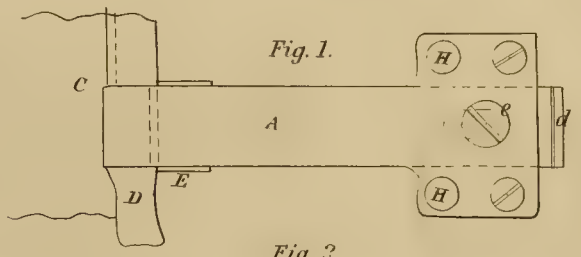

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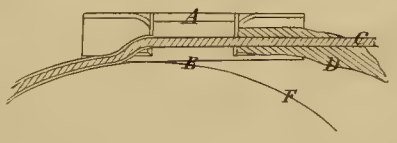

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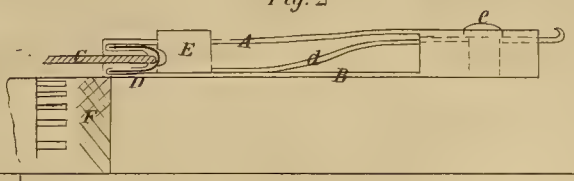
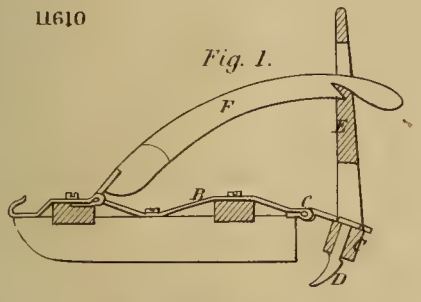


11610

Fig. 1.



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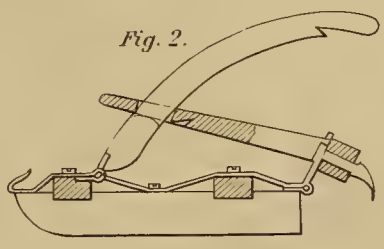


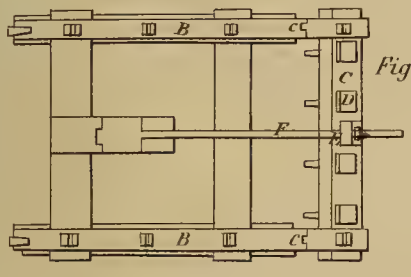
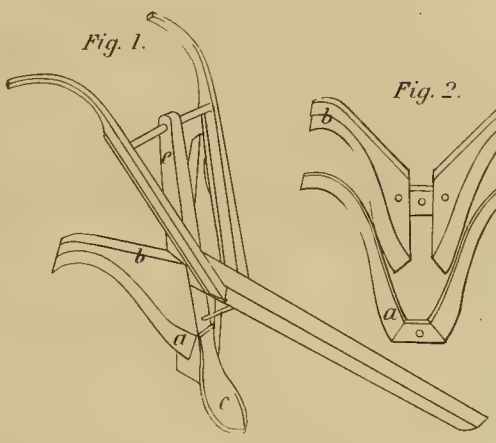


Fig. 3.

11616

Fig. 1.



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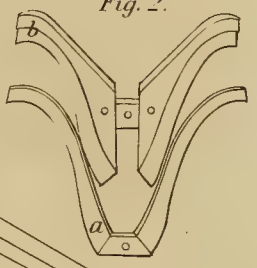

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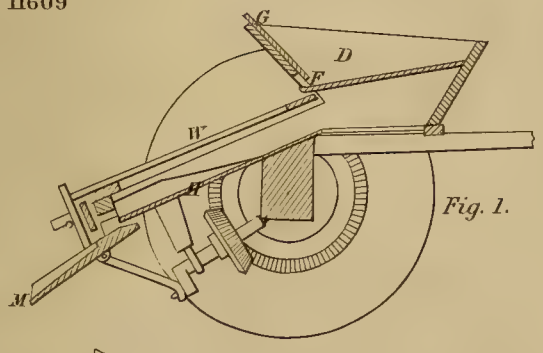

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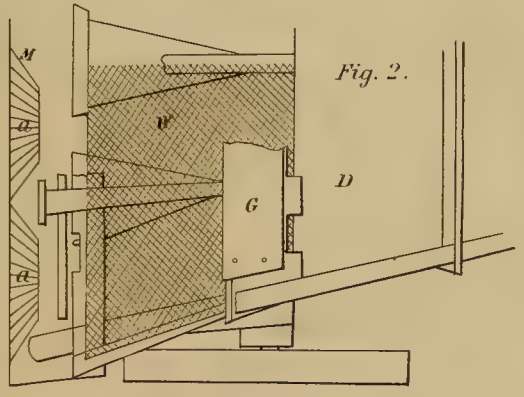

Fig. 2.

11613

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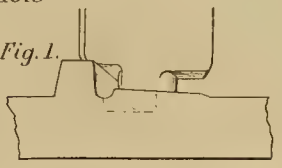

Fig. 2.

Fig. 3.

11611

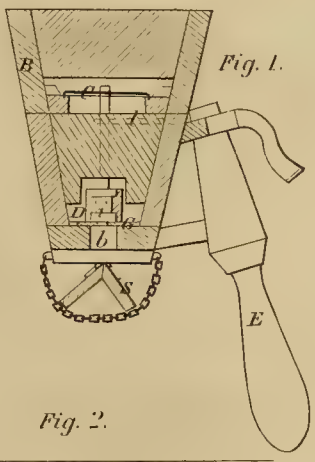

Fig. 2.

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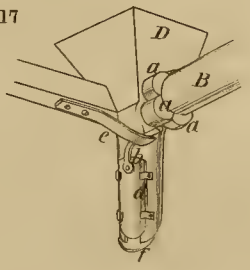

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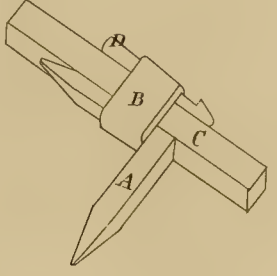

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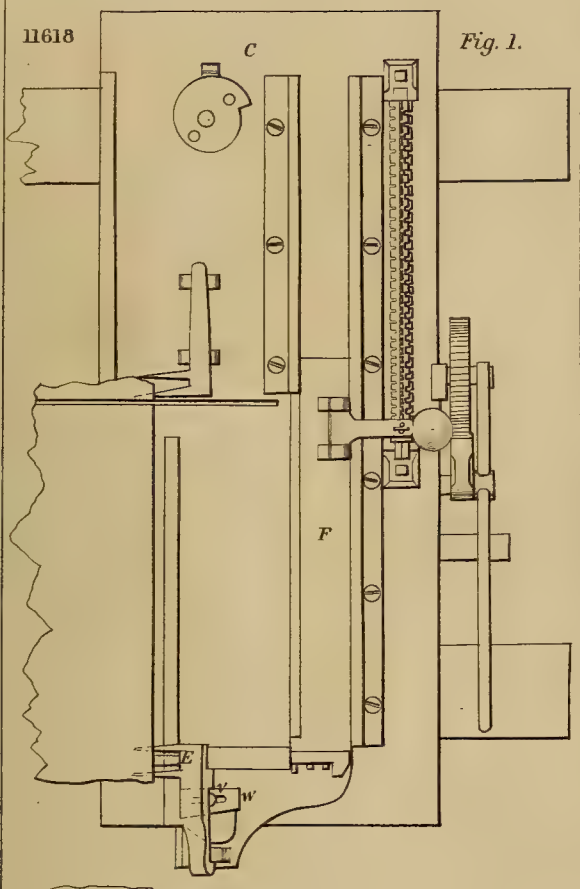

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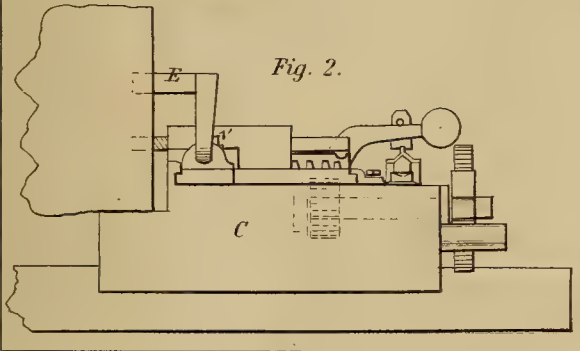

Fig. 2.

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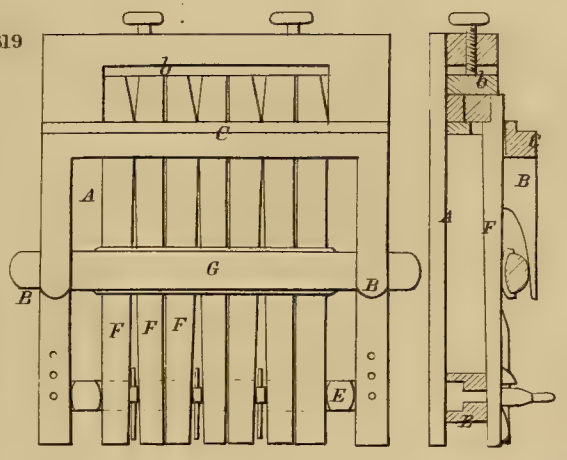

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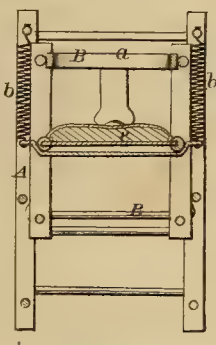

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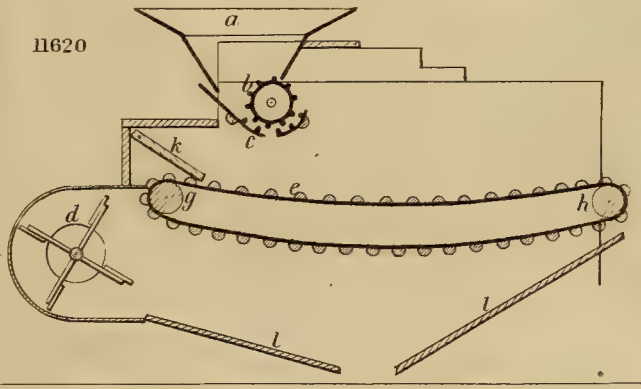

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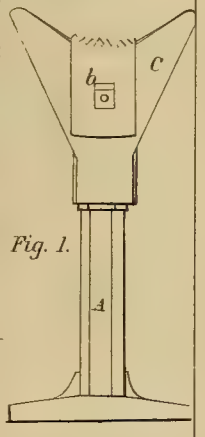

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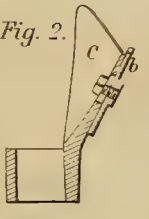

Fig. 2.

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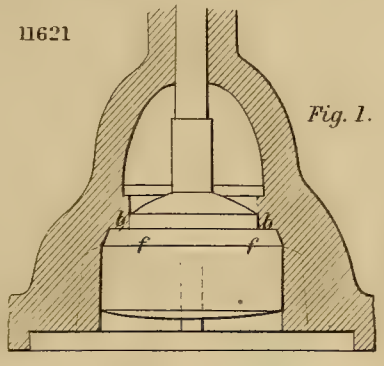

Fig. 1.

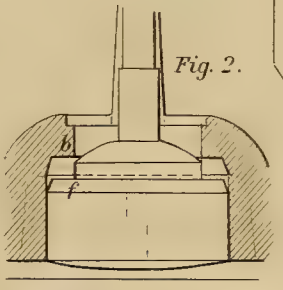

Fig. 2.

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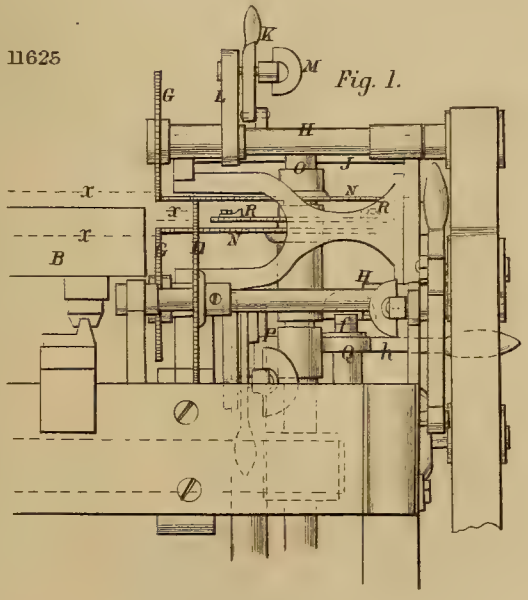

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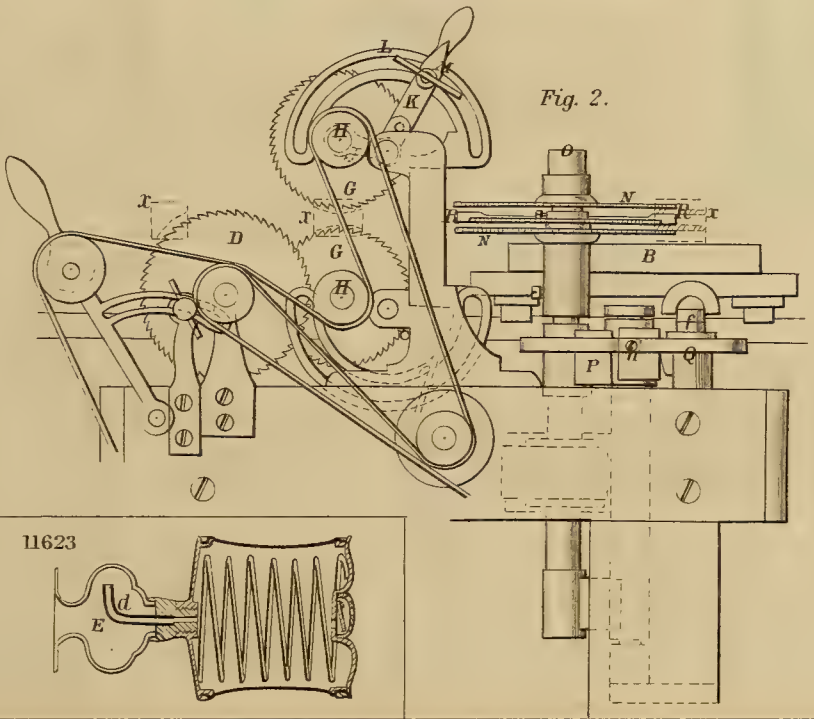

Fig. 2.

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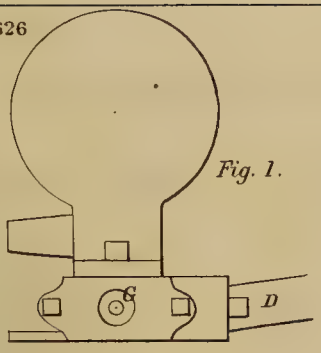

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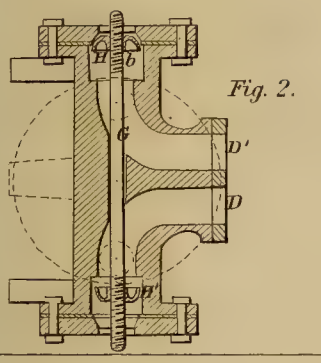

Fig. 2.

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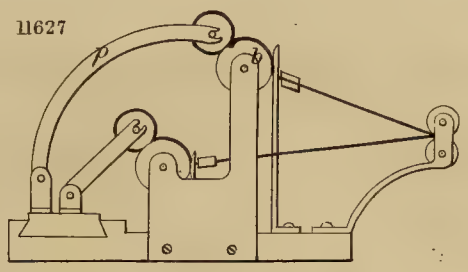

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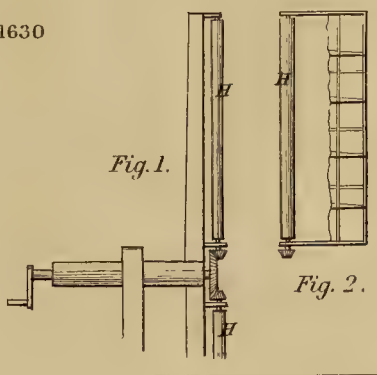
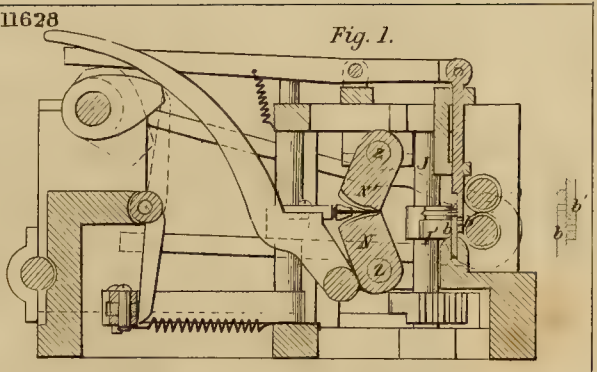


Fig. 1.

Fig. 2.

11628



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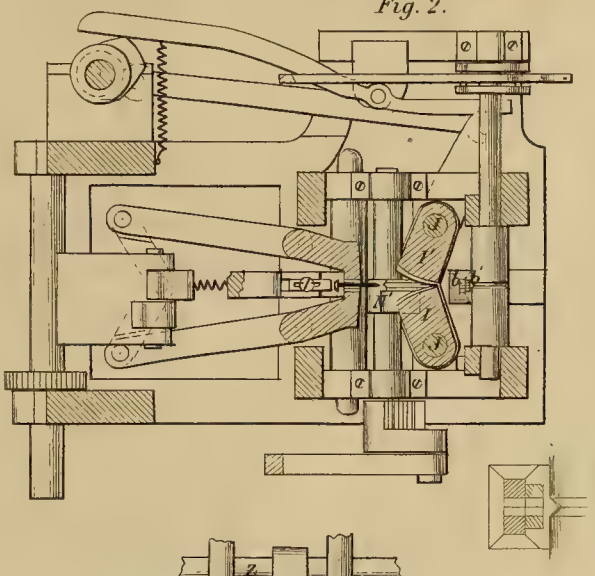

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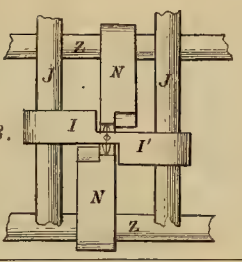
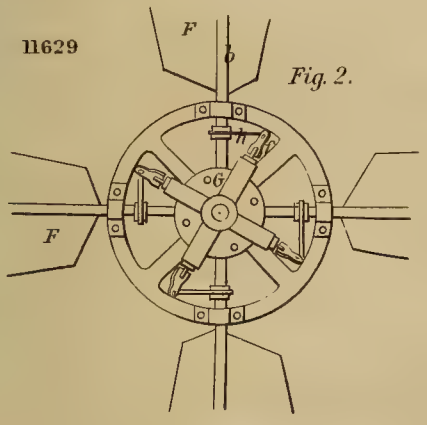


Fig. 3.

11629



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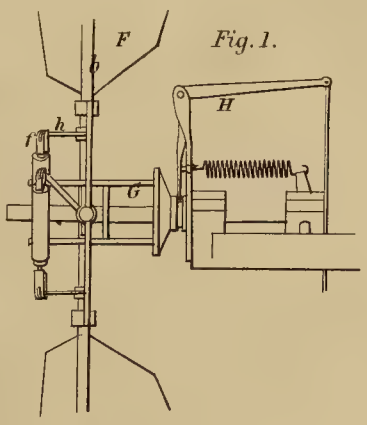

Fig. 1.

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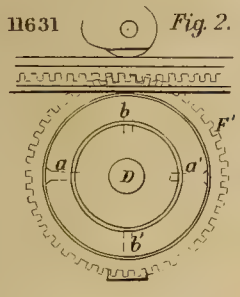

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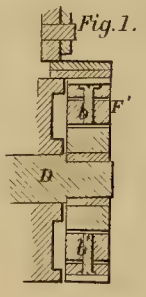

Fig. 1.

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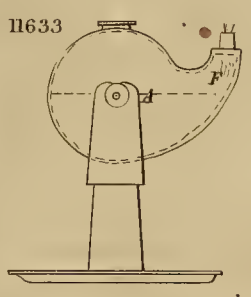

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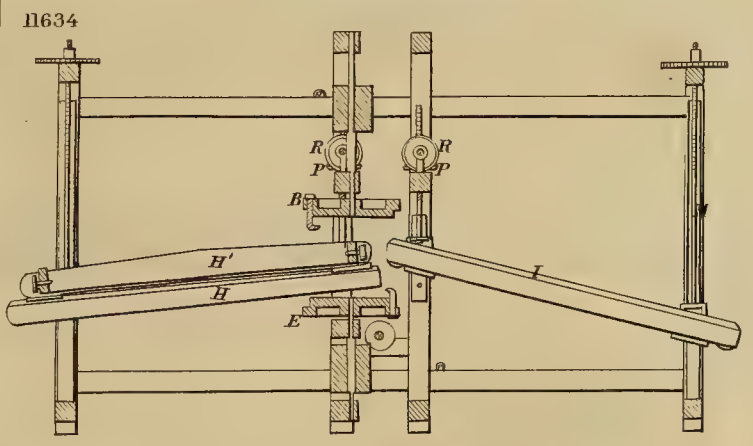

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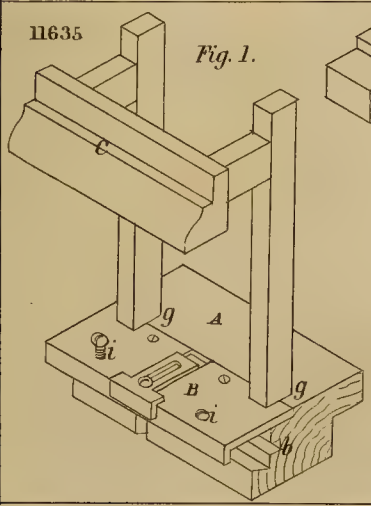

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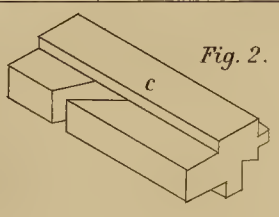

Fig. 2.

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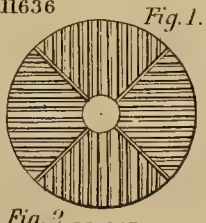
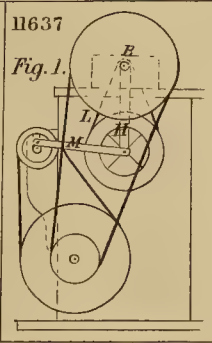


Fig. 1.

Fig. 2

11632

11637



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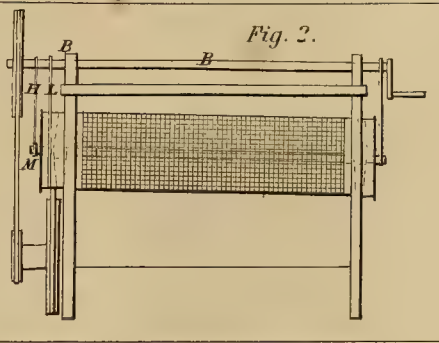

Fig. 2.

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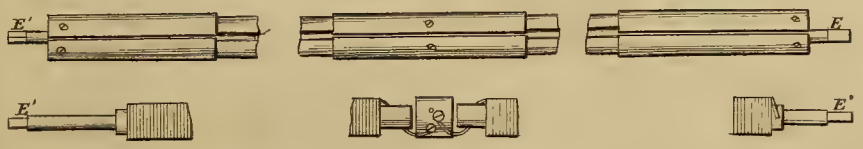

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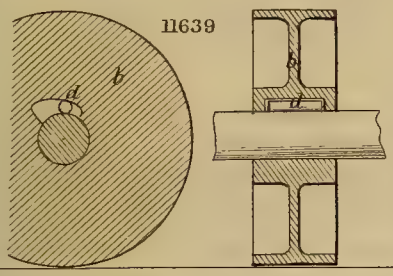

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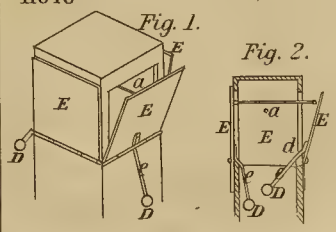

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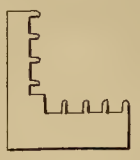

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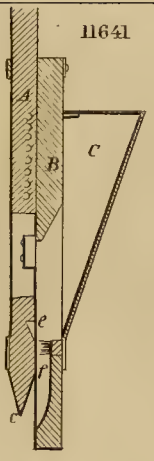

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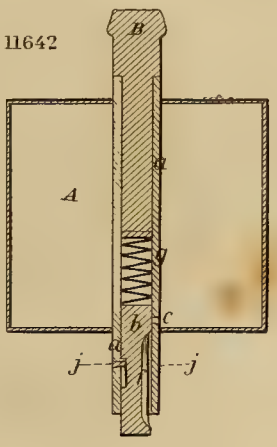

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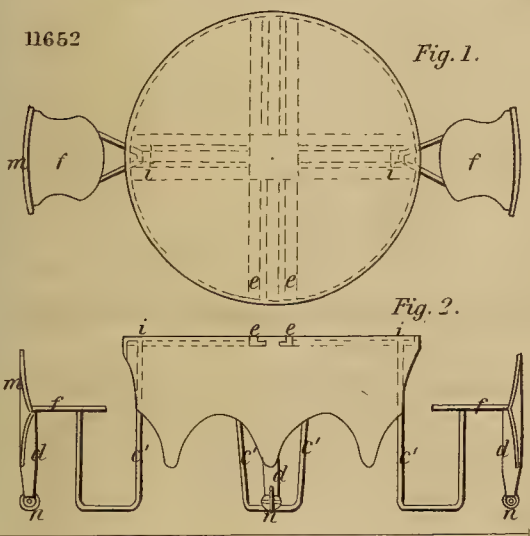

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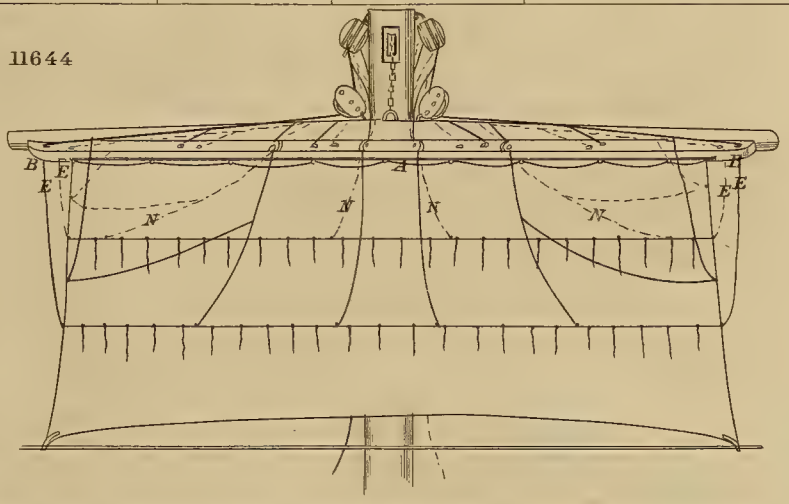

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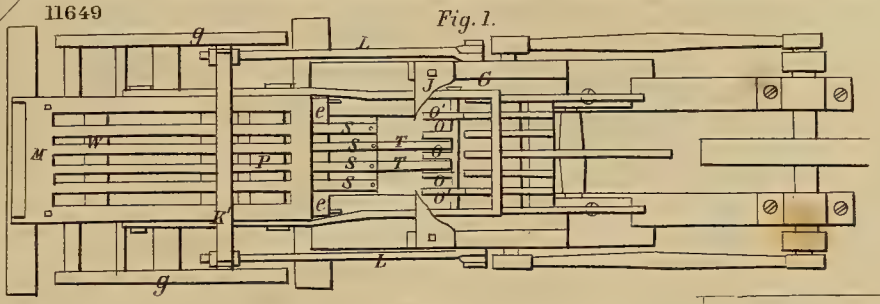

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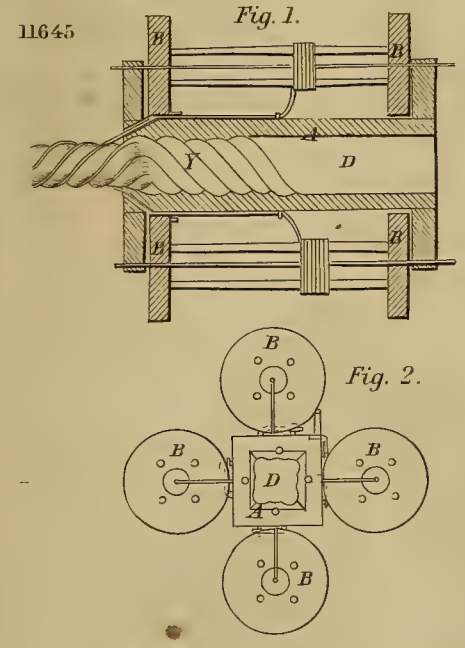

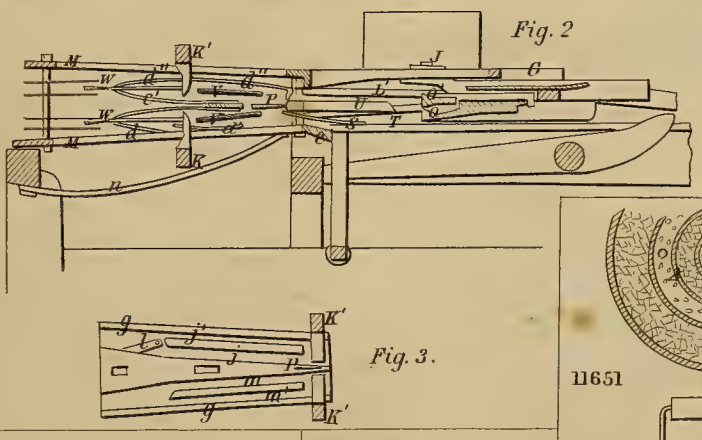

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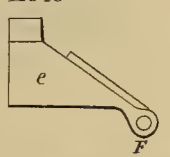

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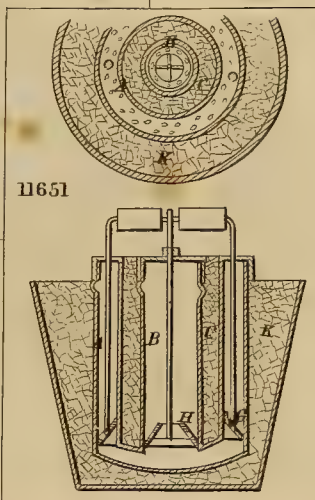

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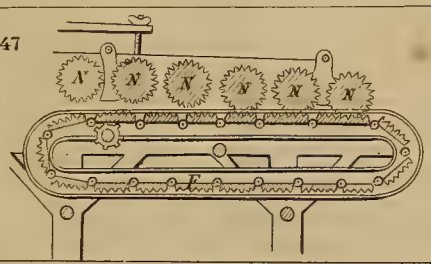

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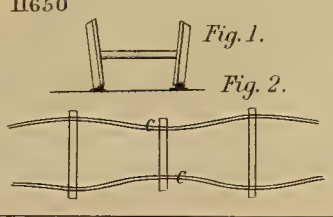

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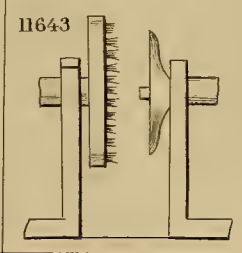

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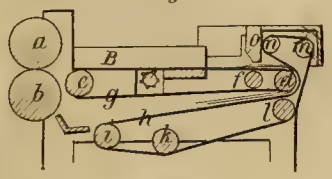
Fig. 1.



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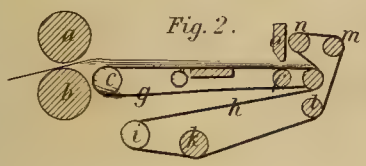

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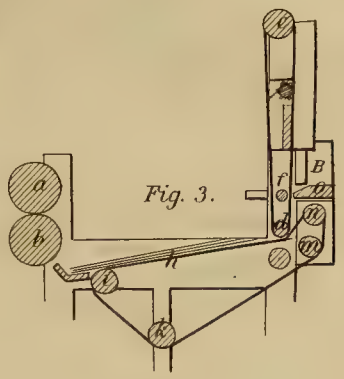

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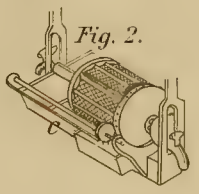

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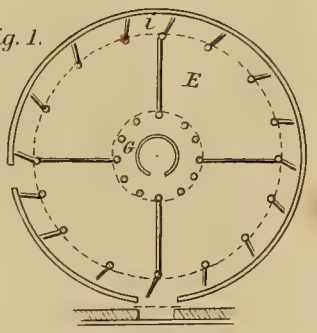

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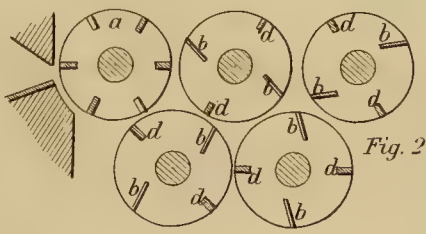

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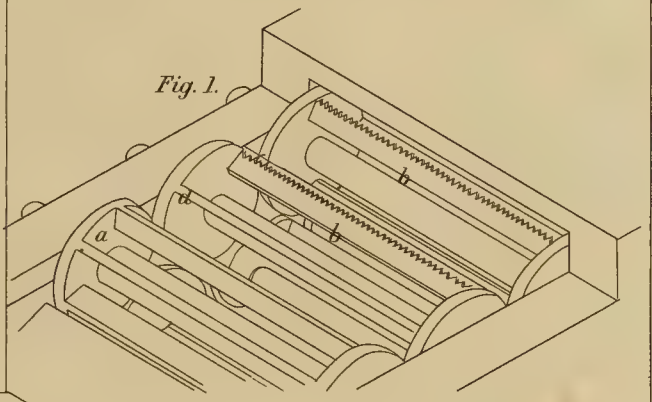

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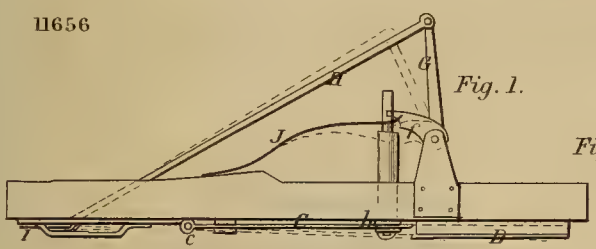

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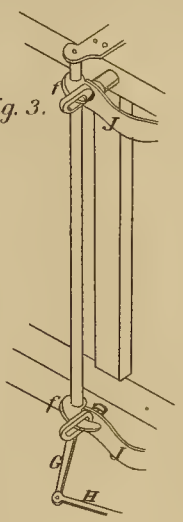

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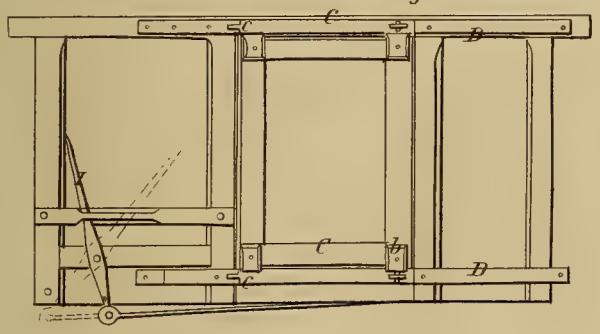

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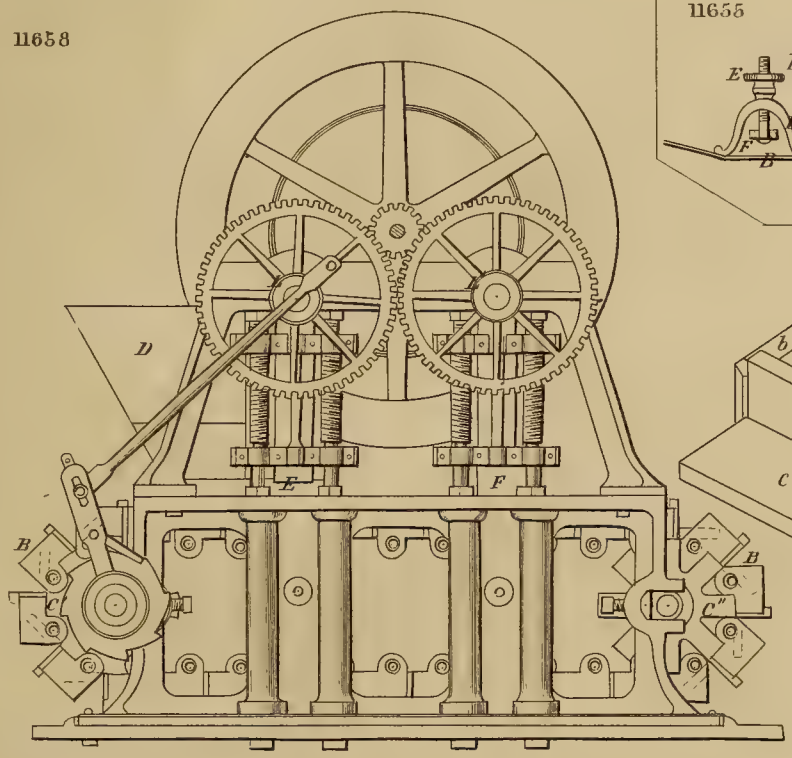

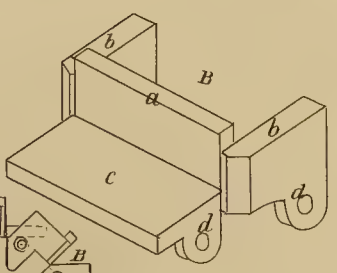

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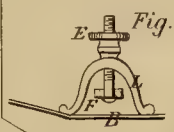

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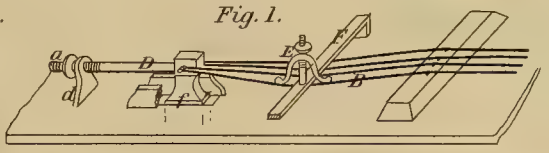

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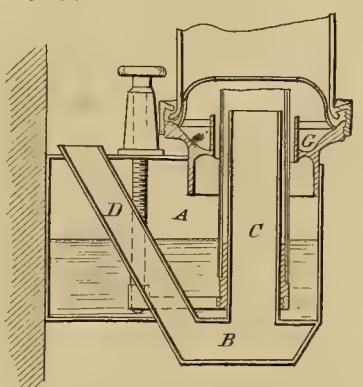

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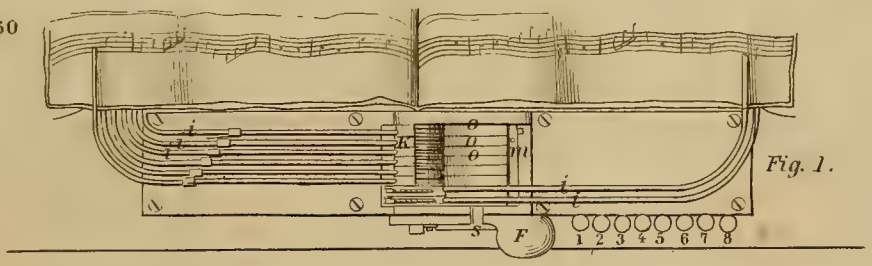

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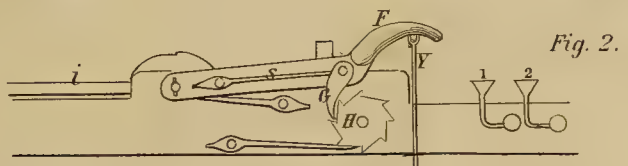

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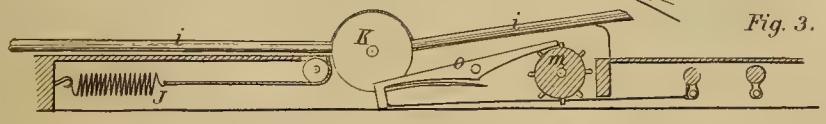

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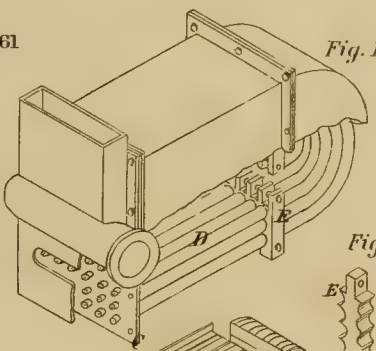

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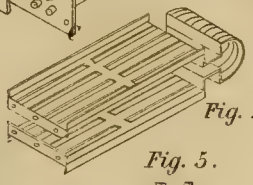

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Fig. 4.

Fig. 5.

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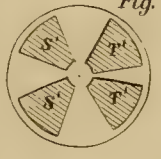

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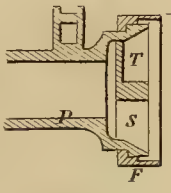

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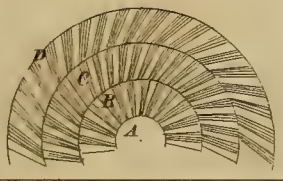

Fig. 4.

Fig. 2.

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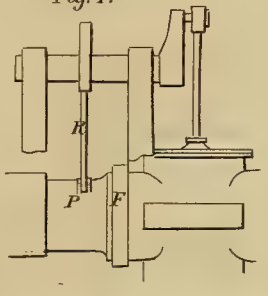

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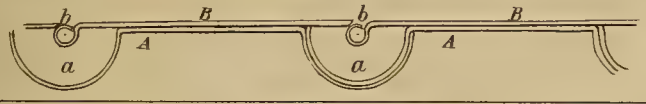

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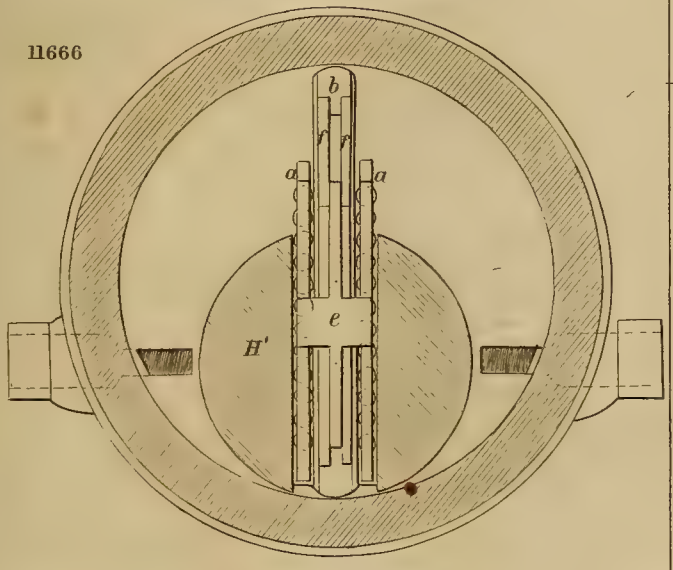

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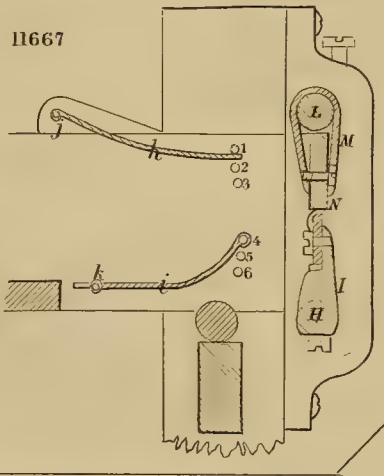

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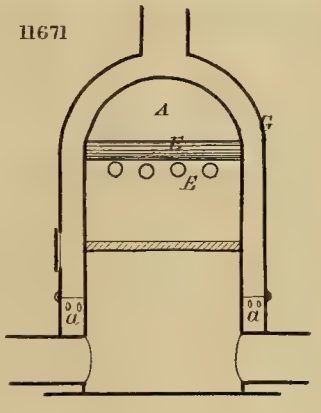

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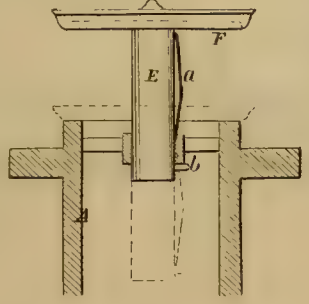

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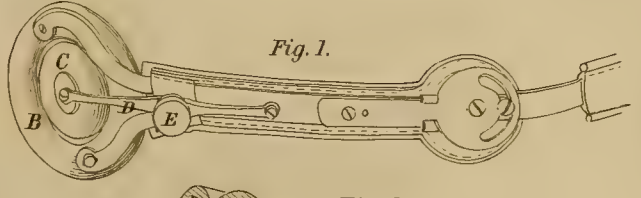

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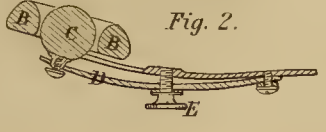

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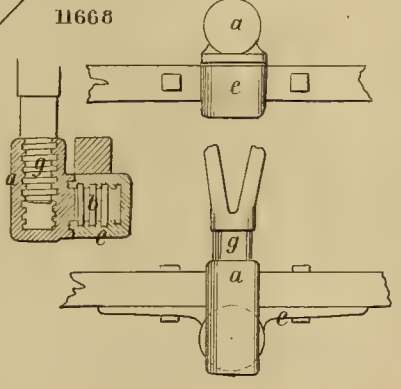

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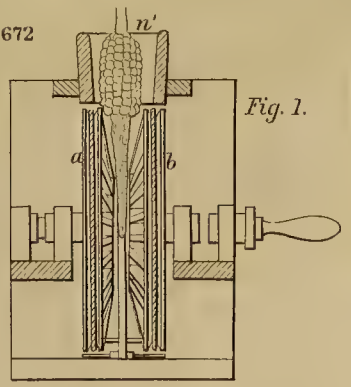

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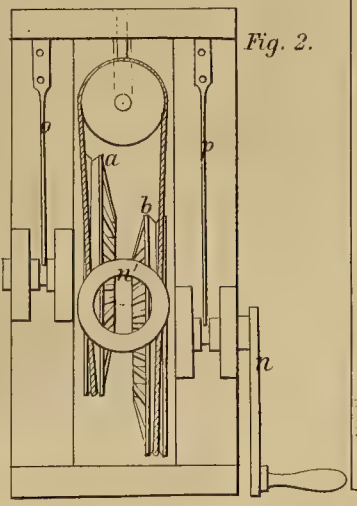

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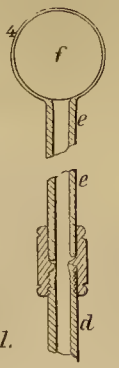

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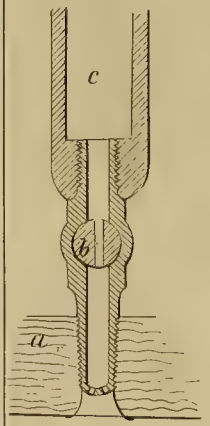

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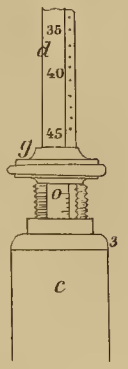

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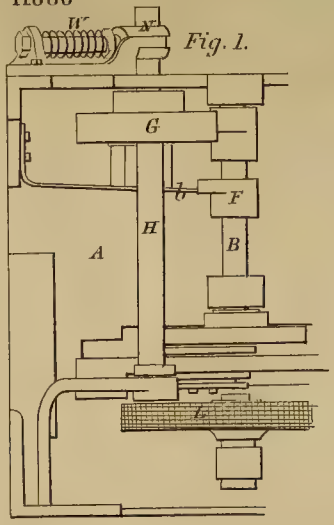

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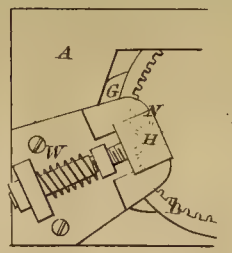

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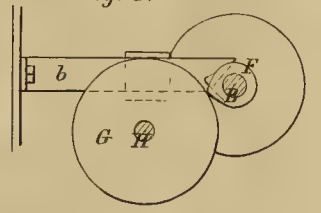

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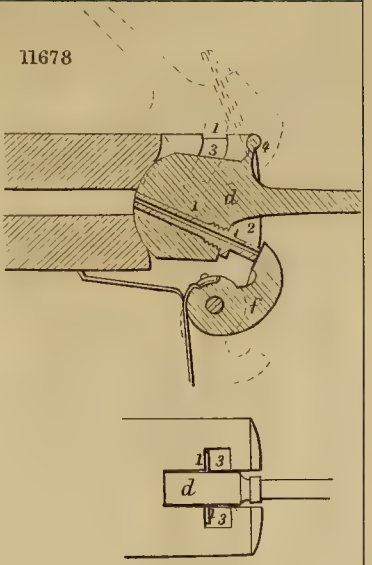

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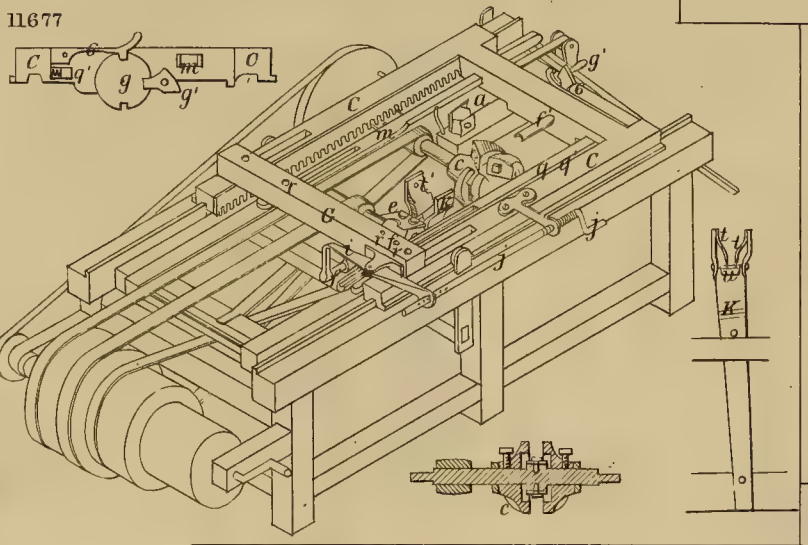

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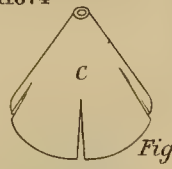

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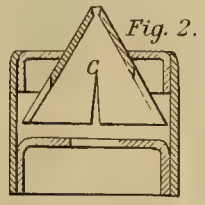

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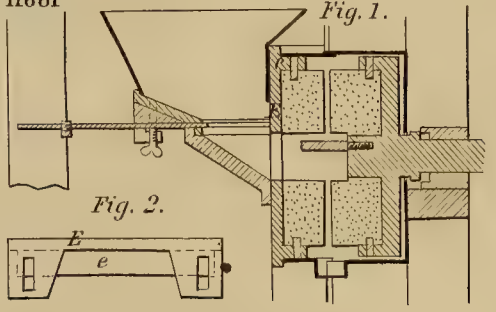

Fig. 1.

Fig. 2.

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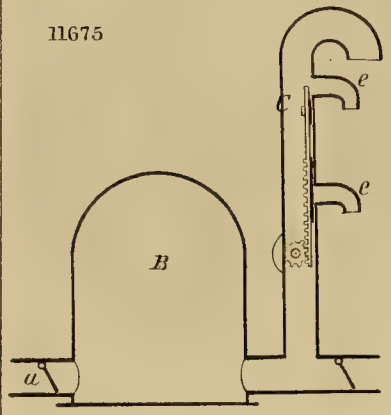

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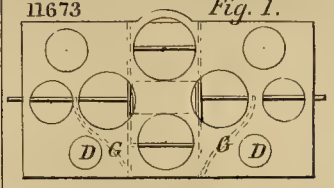

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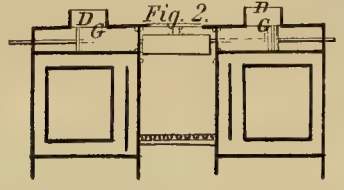

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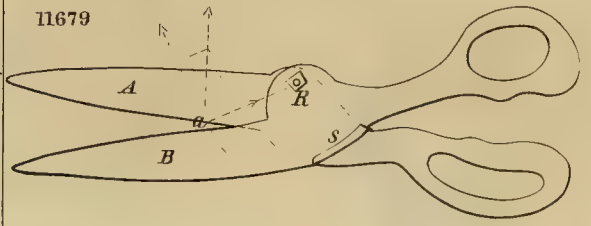

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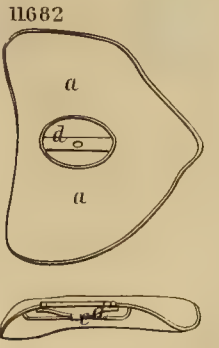

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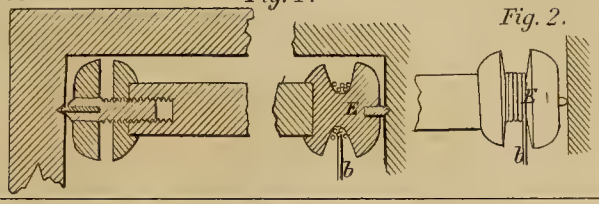

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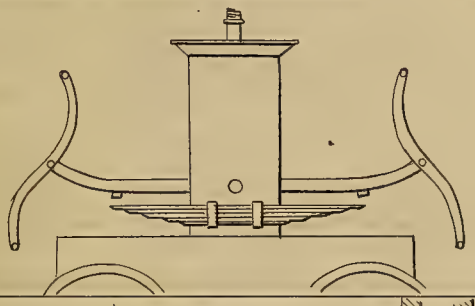

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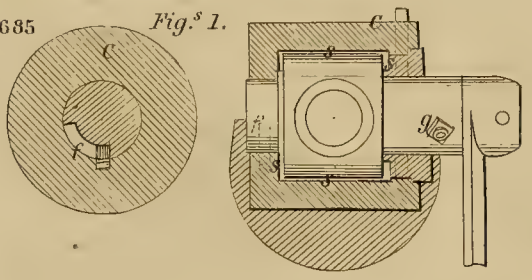

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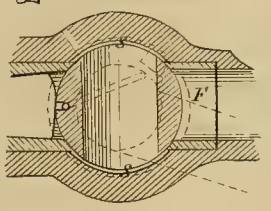

Figs. 2.

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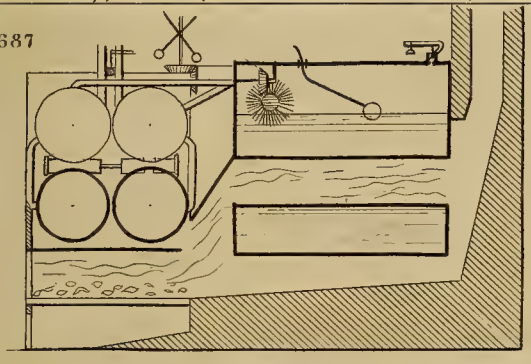

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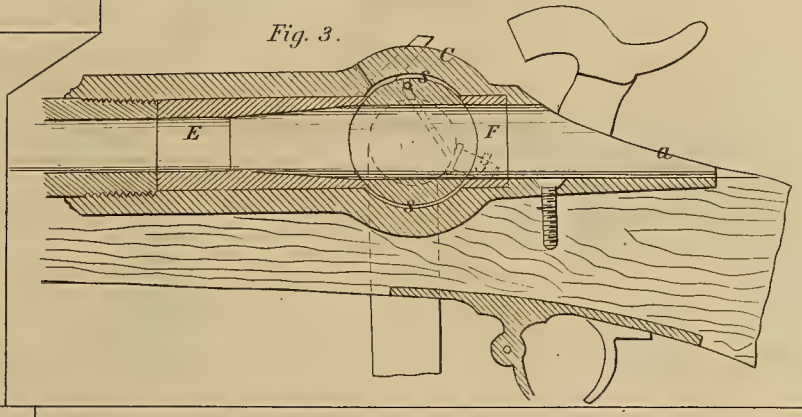

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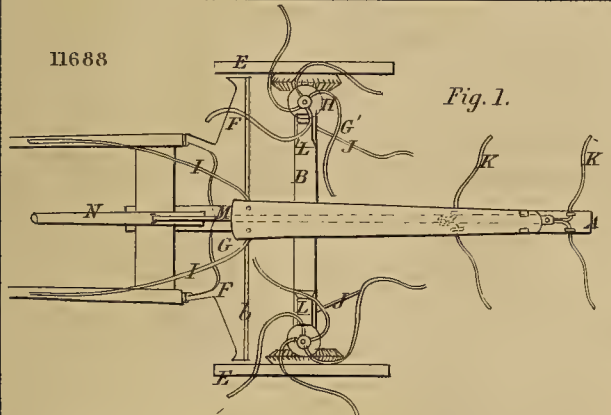

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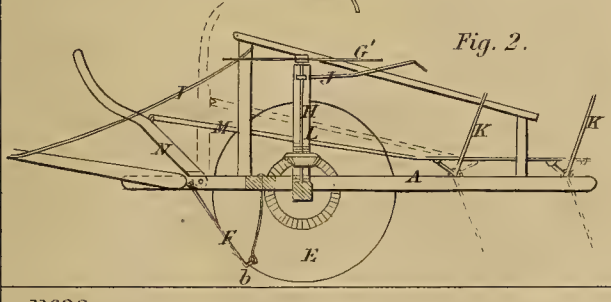

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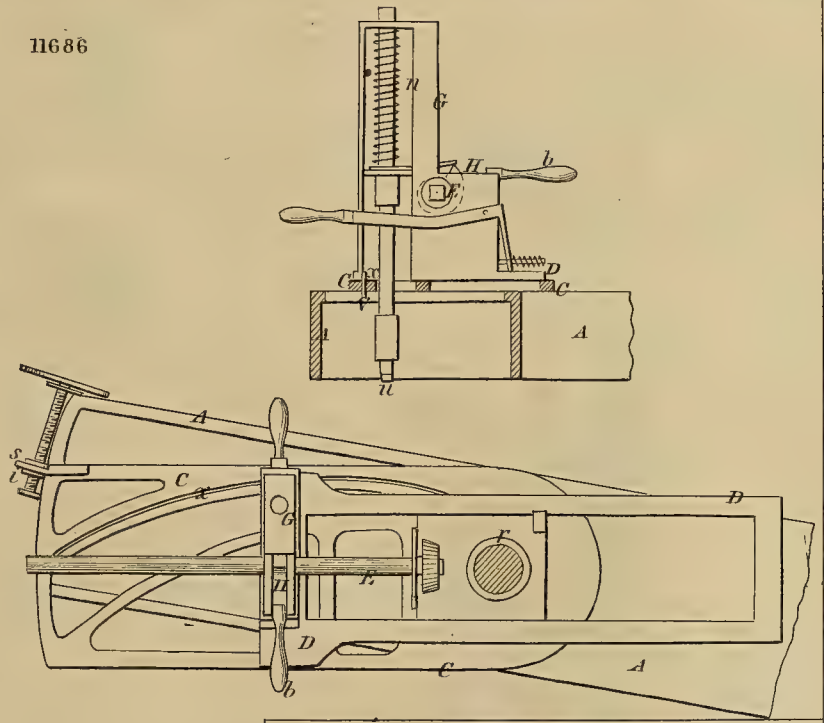

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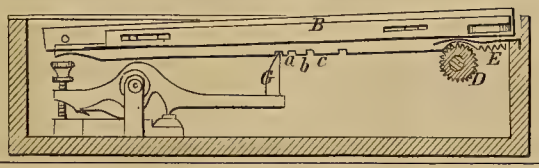

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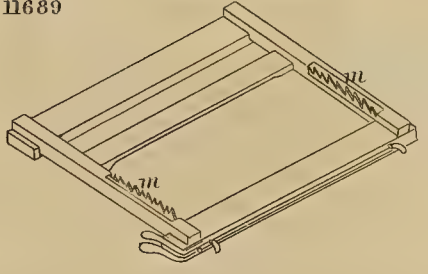

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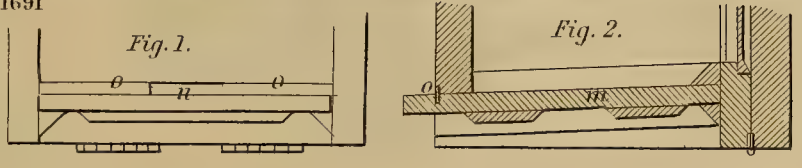

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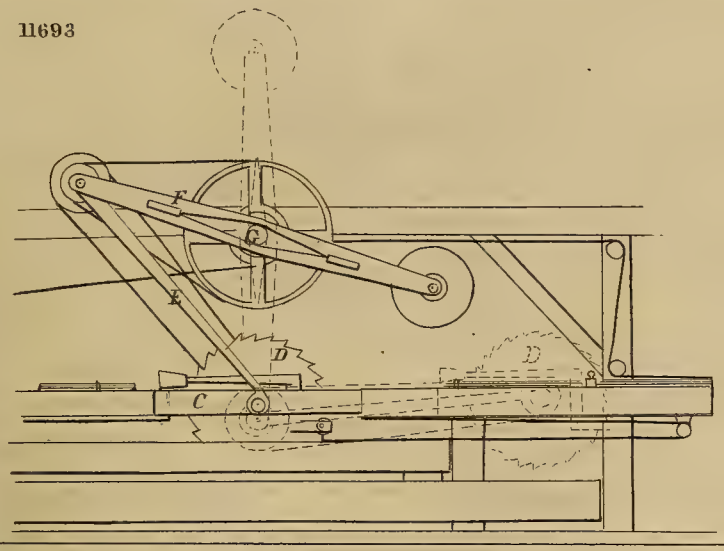

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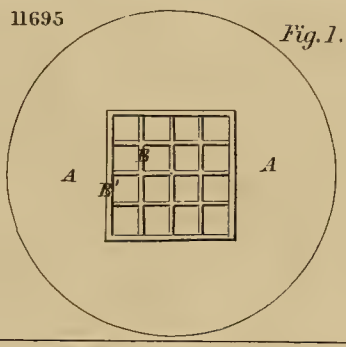

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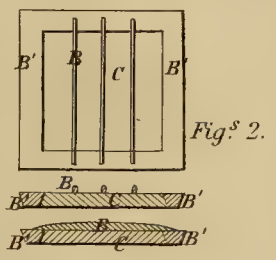

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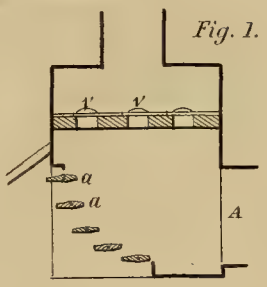

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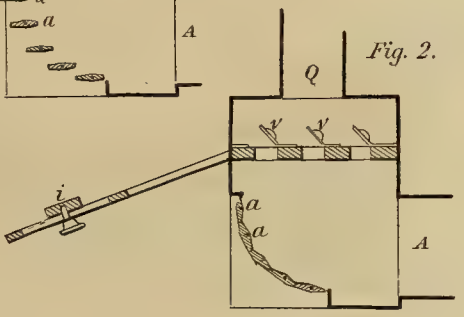

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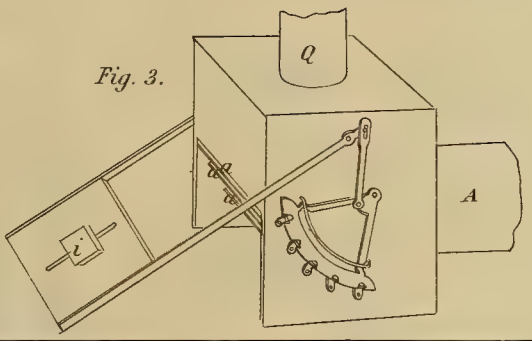

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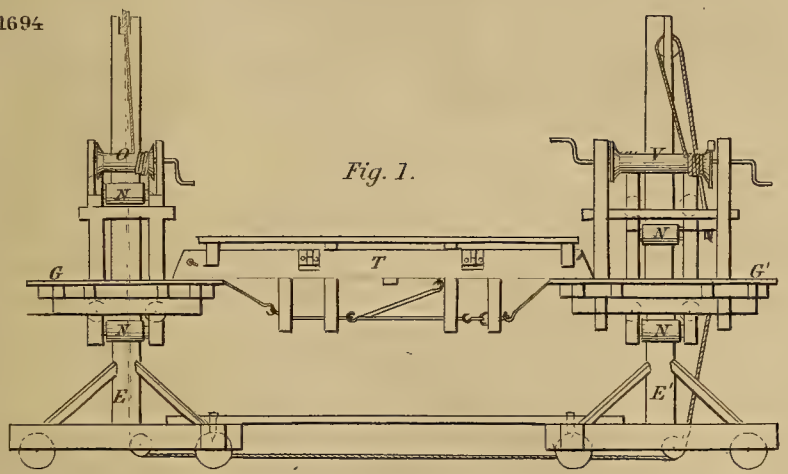

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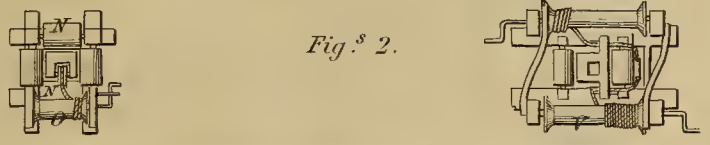

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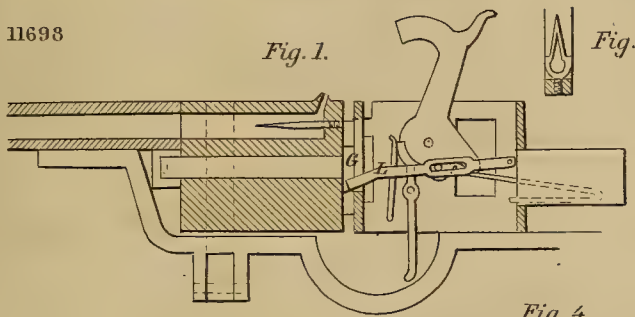

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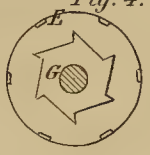

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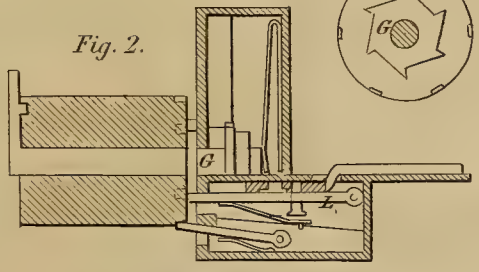

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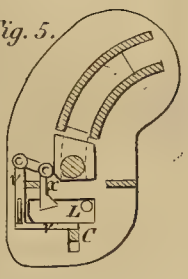

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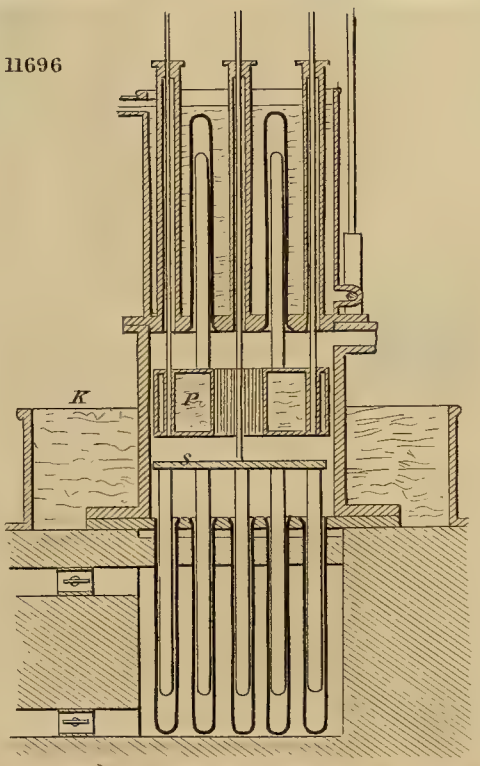

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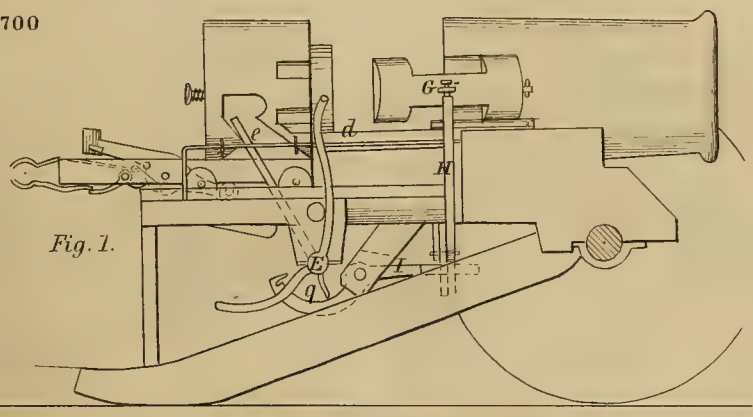

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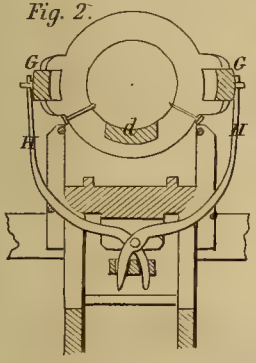

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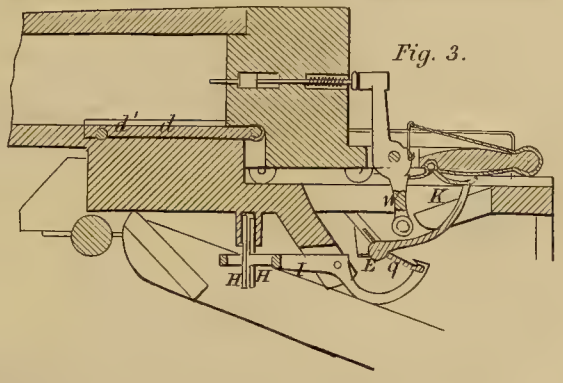

Fig. 3.

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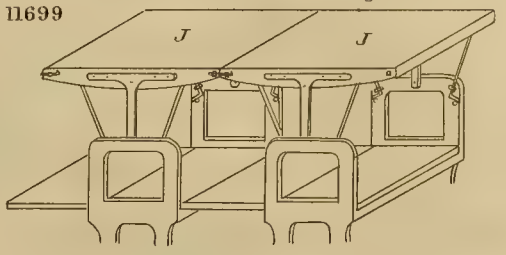

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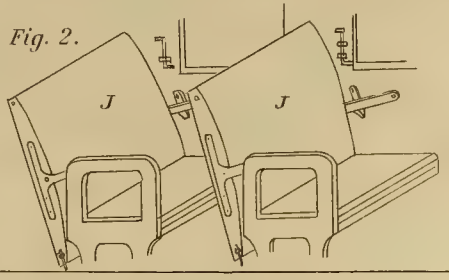

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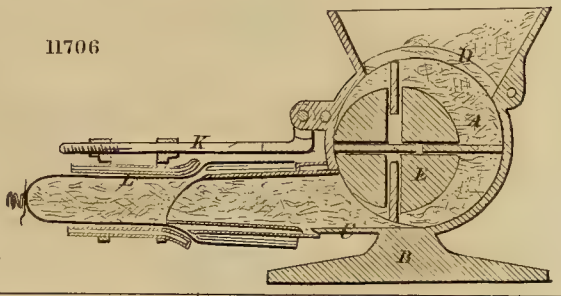

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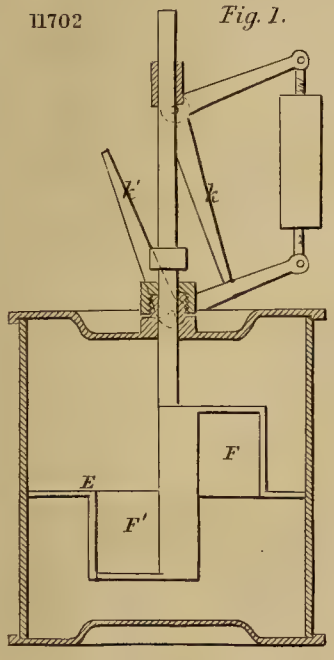

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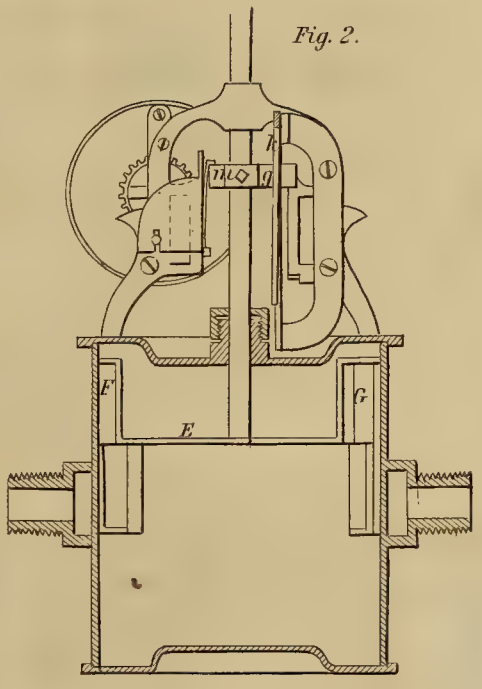

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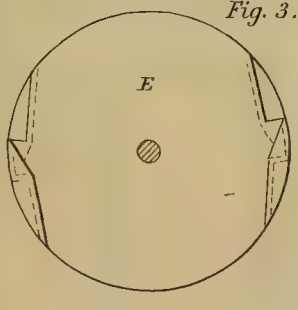

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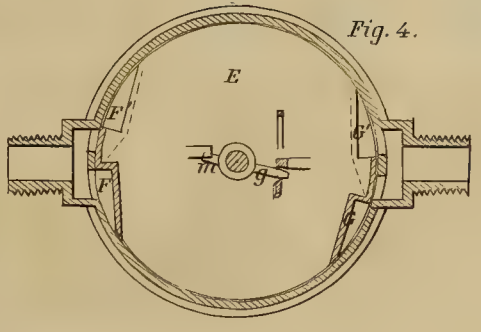

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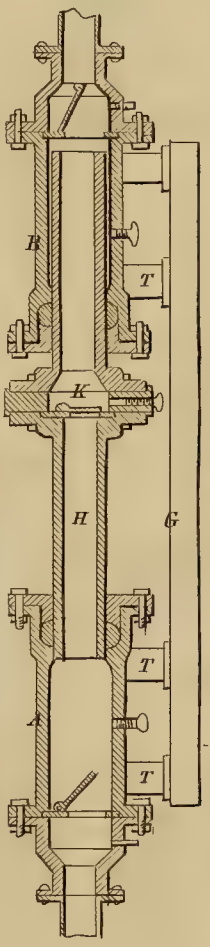

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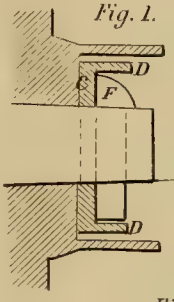

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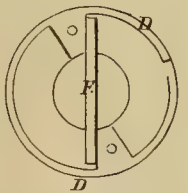

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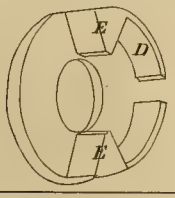

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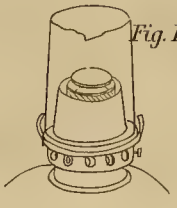

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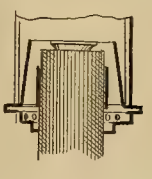

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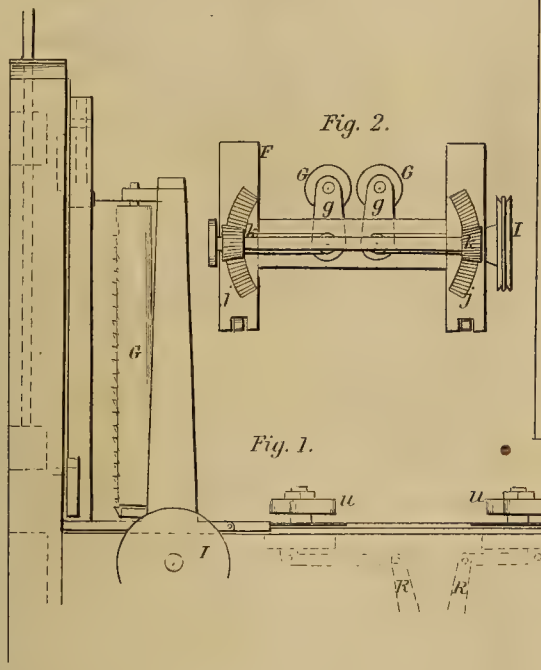

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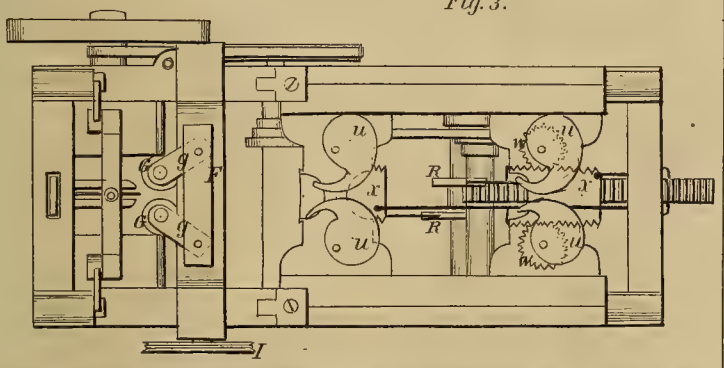

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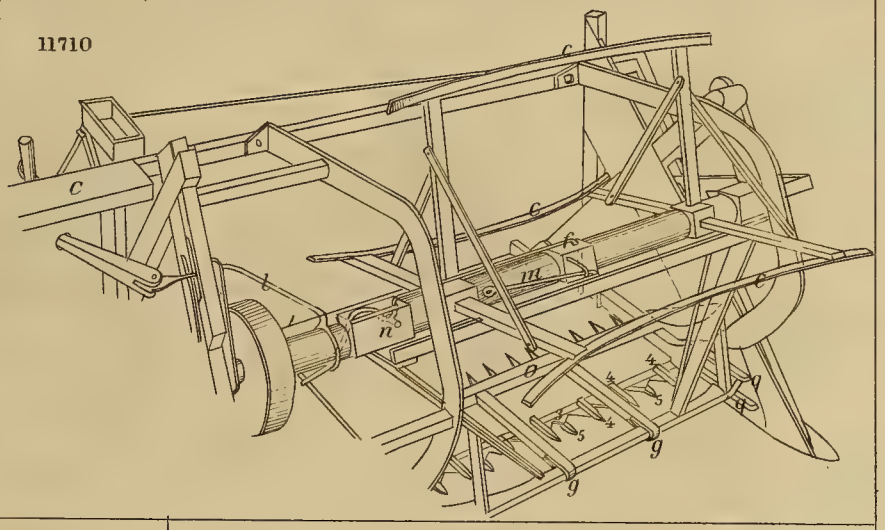

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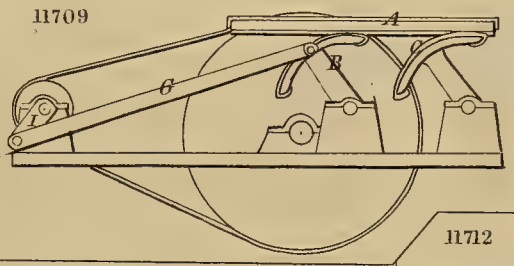

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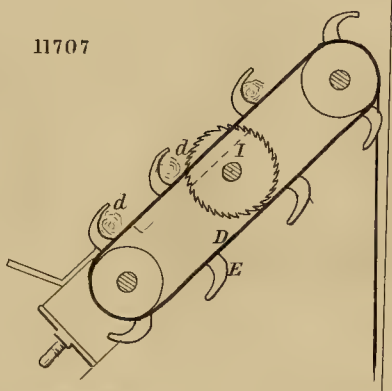

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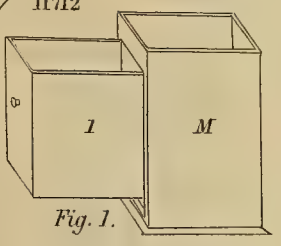

Fig. 1.

Fig. 2.

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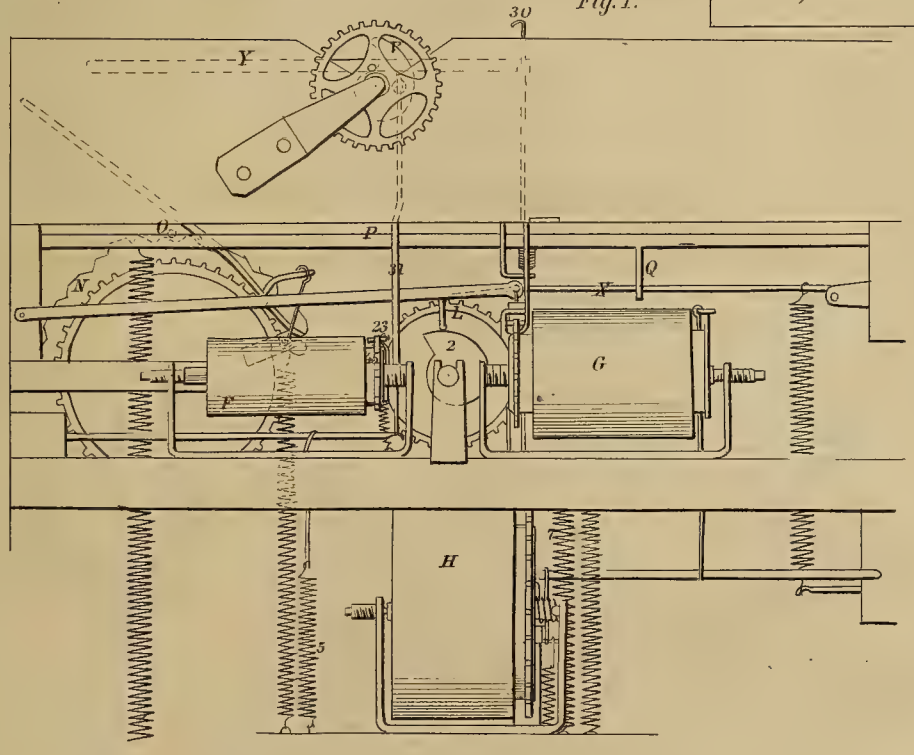

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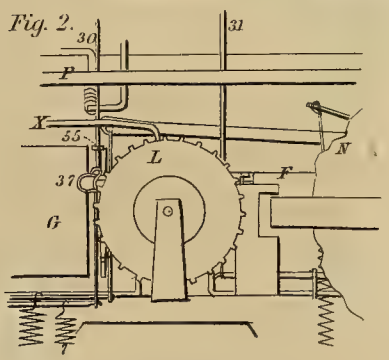

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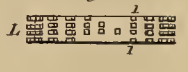

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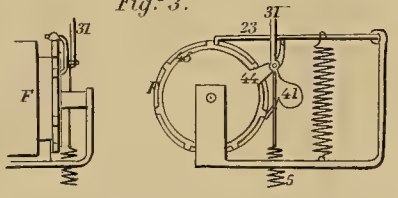

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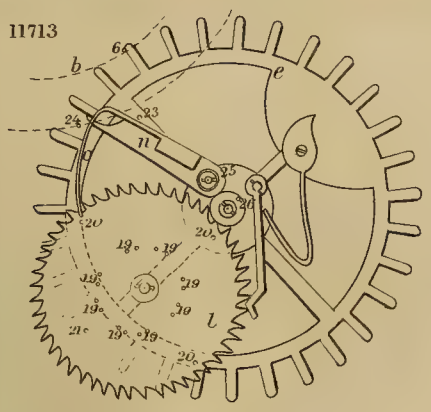

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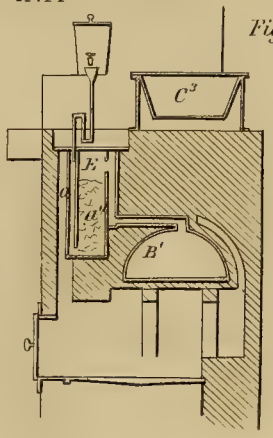

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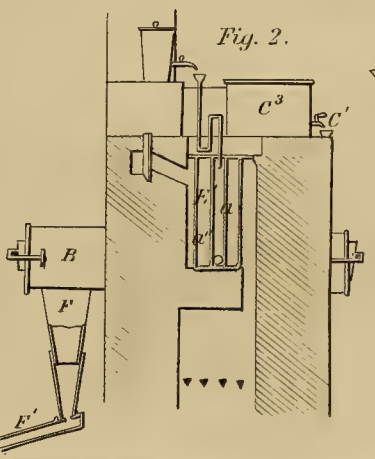

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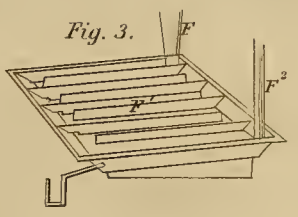

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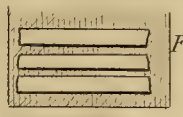

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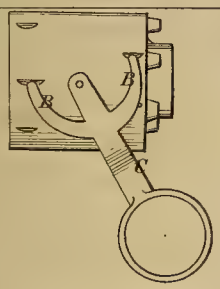

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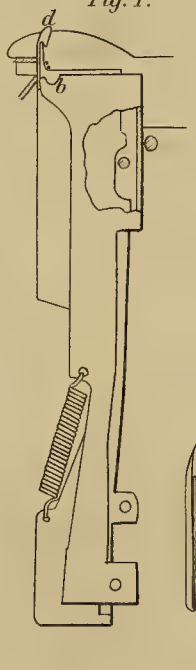

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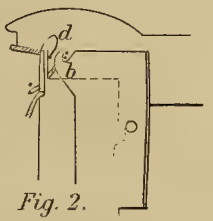

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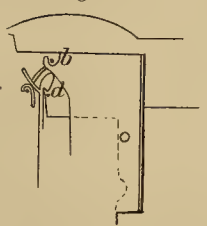
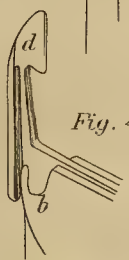


Fig. 4.



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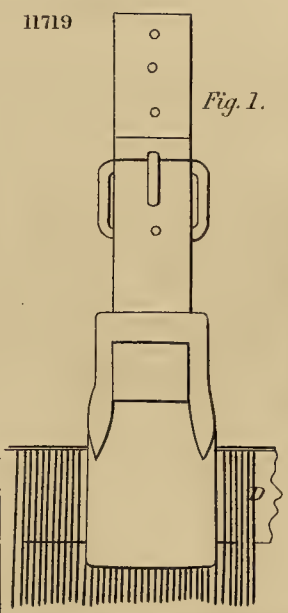

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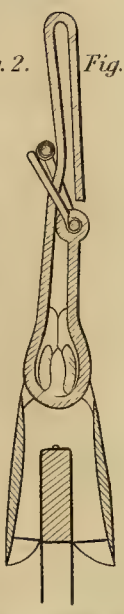
Fig. 3.



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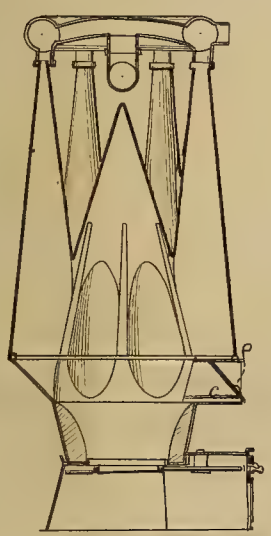

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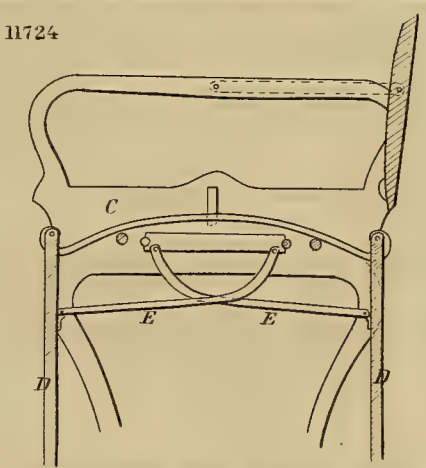

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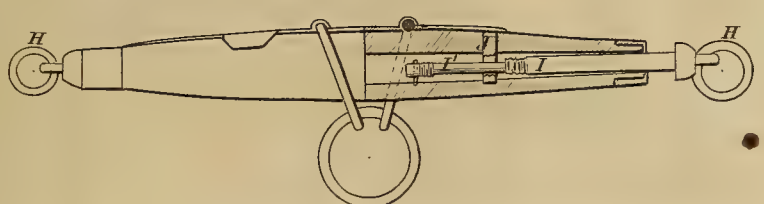

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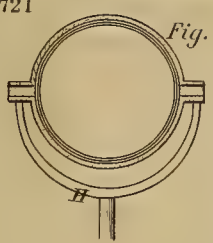

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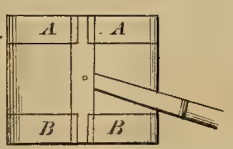

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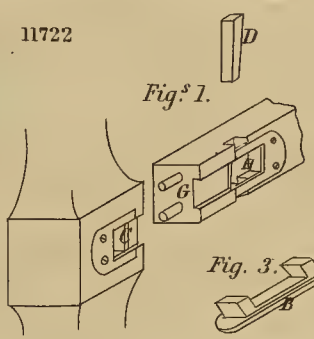

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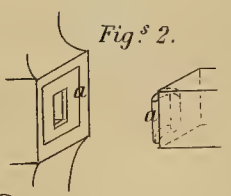

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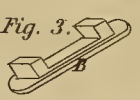

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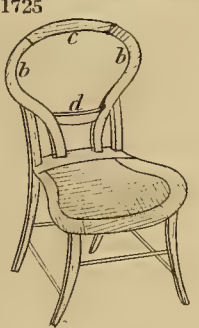

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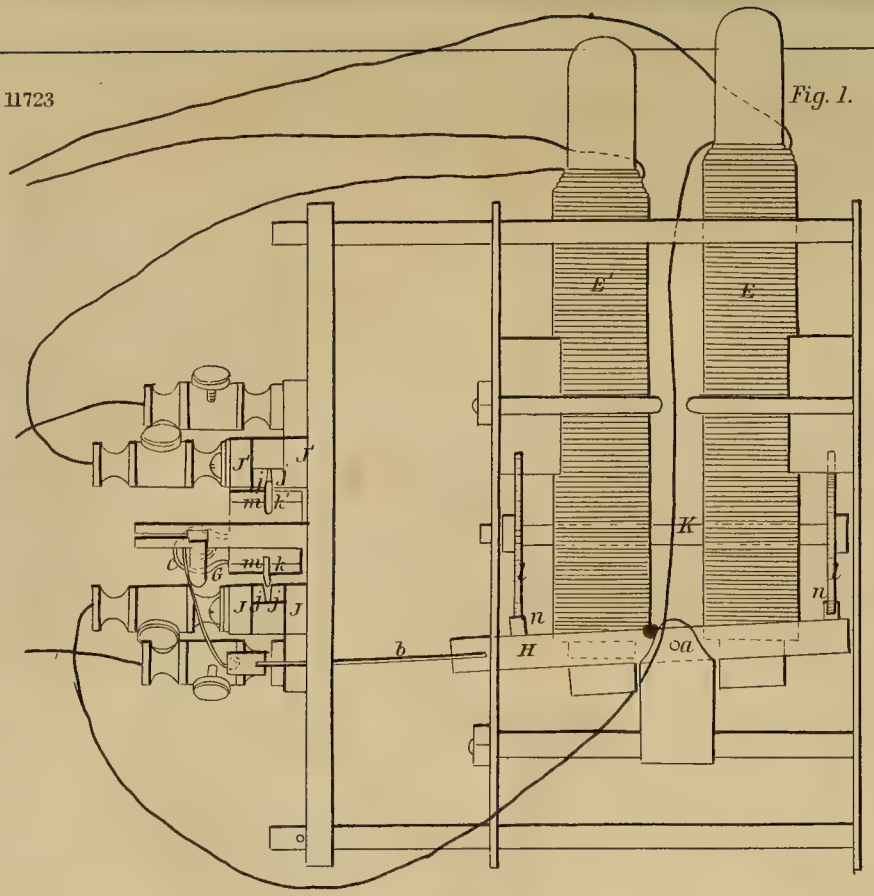

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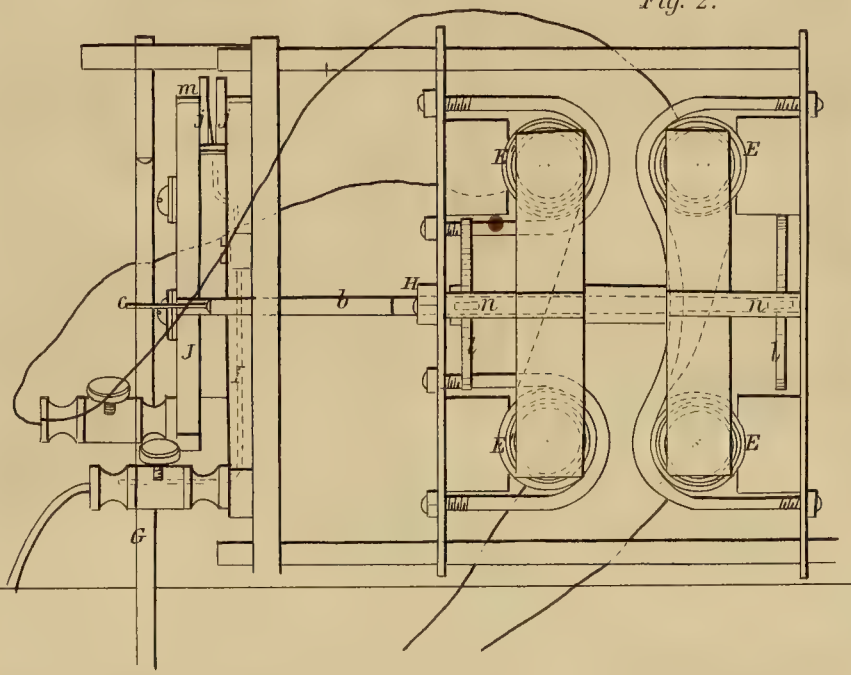

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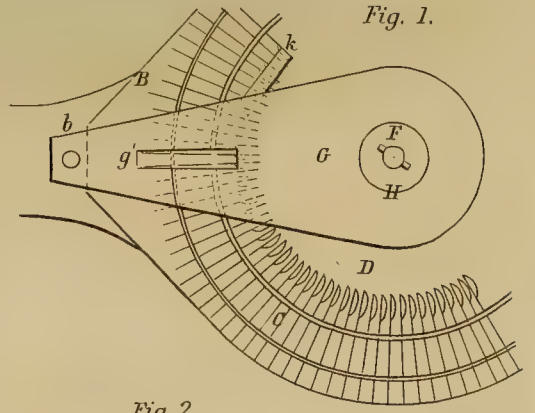

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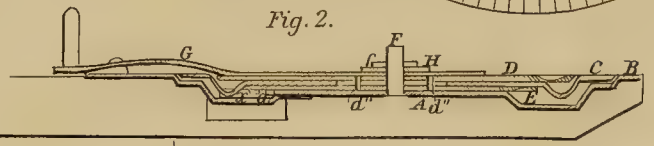

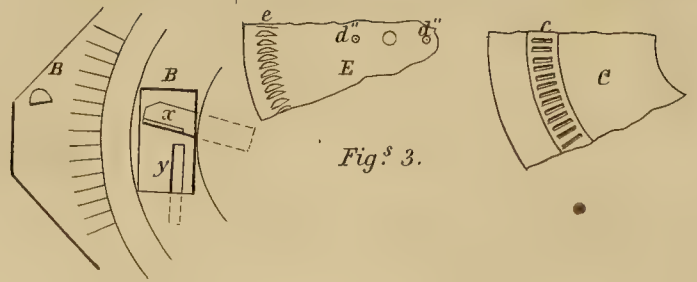

Figs 3.

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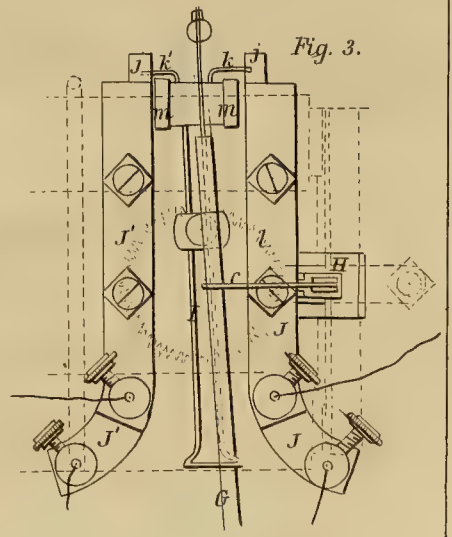

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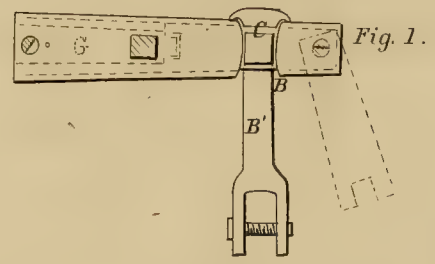

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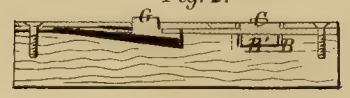

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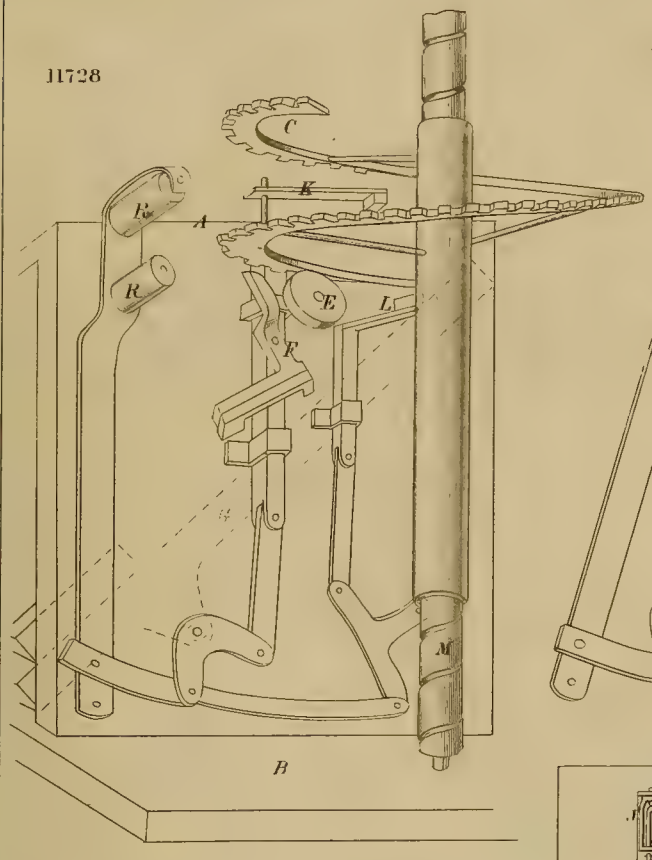

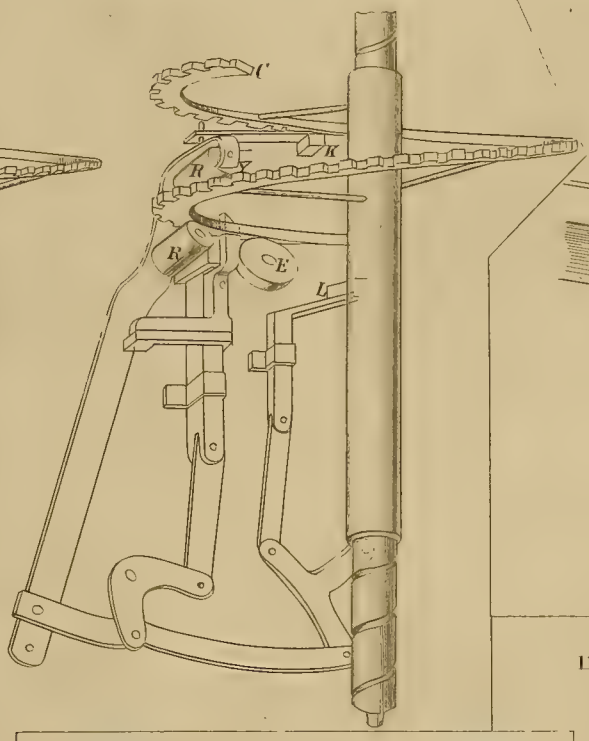

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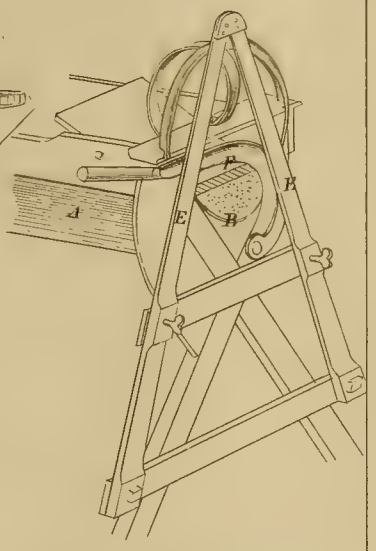

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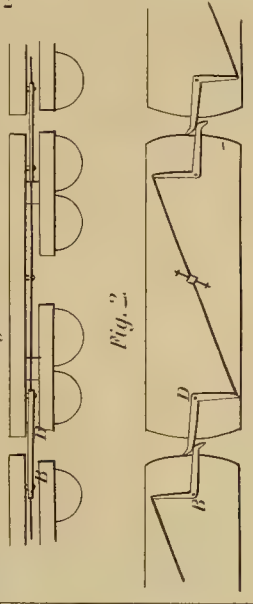

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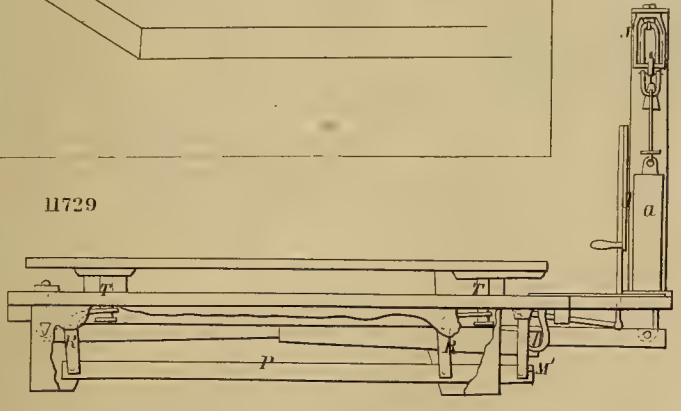

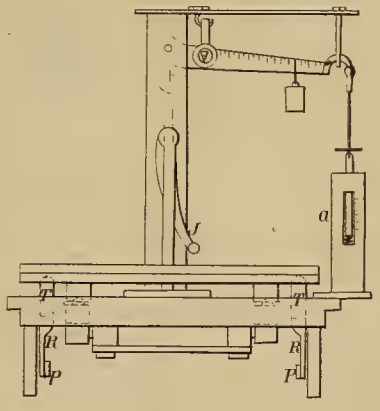

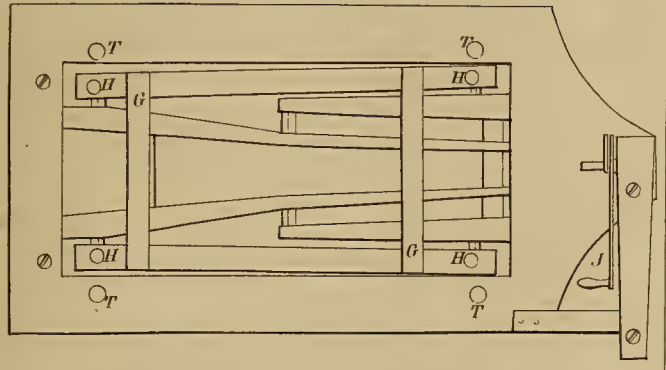

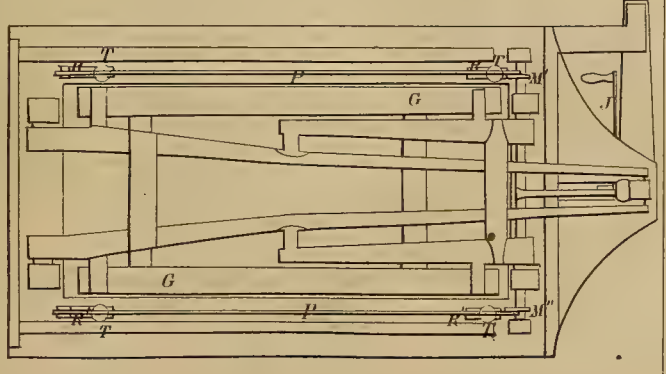

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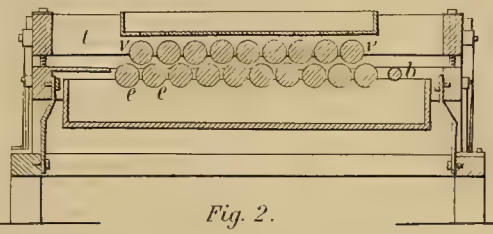

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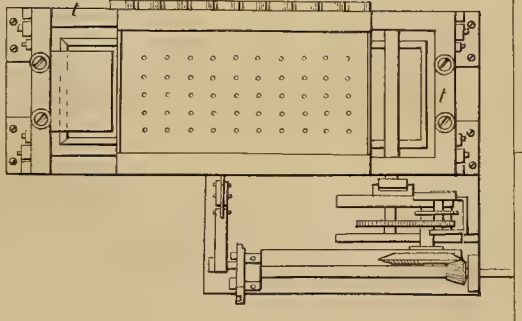

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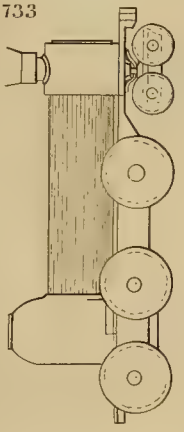

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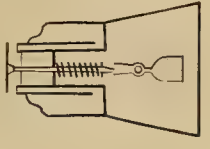

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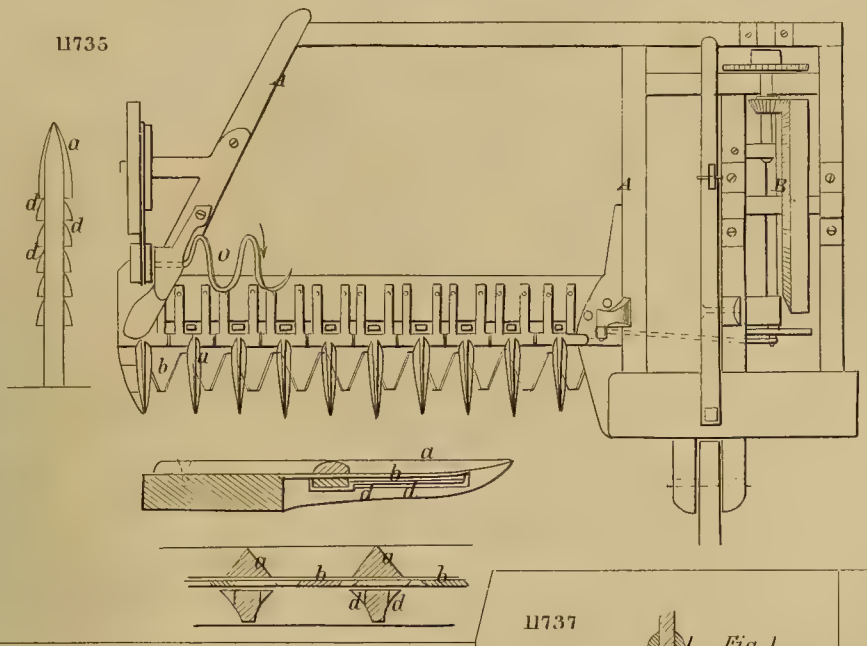

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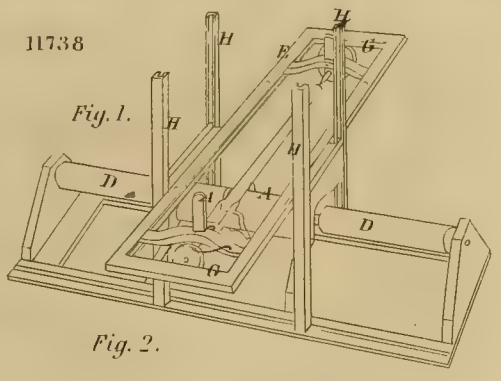

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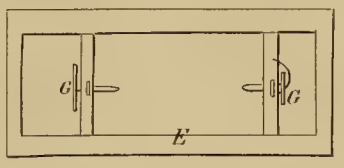

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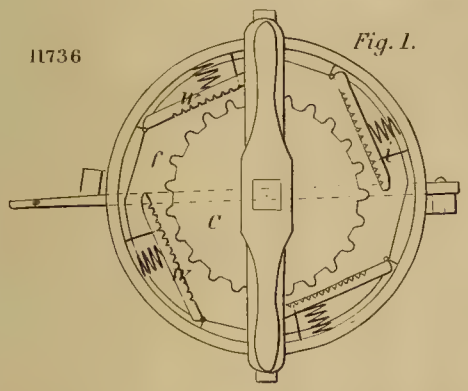

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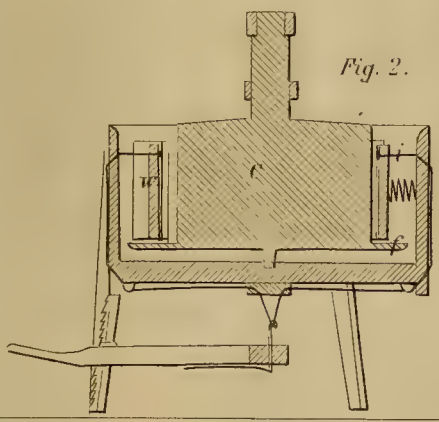

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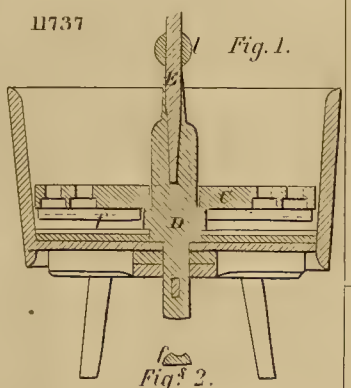

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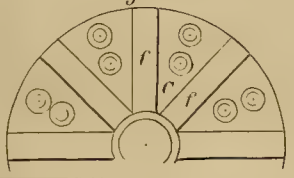

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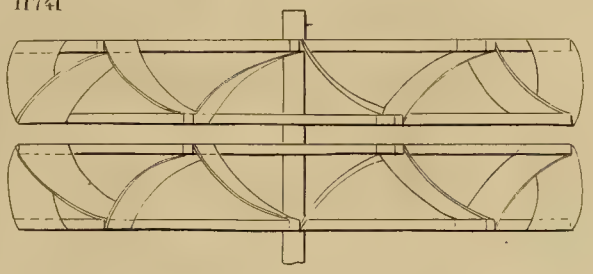

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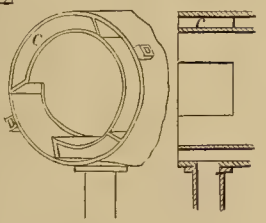

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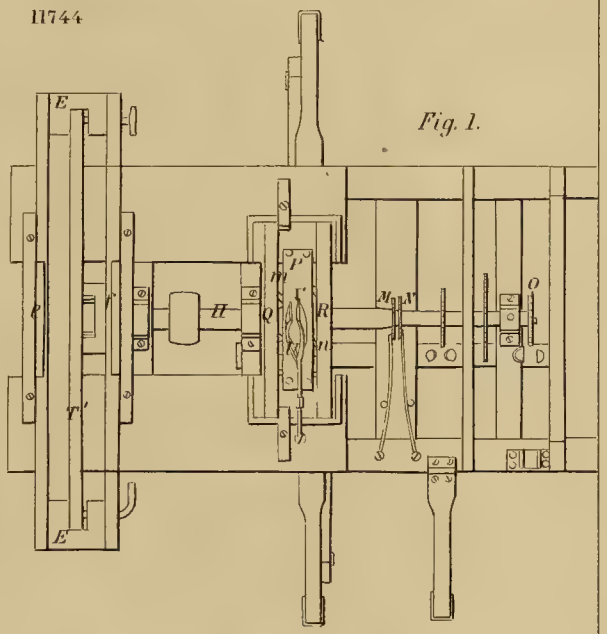

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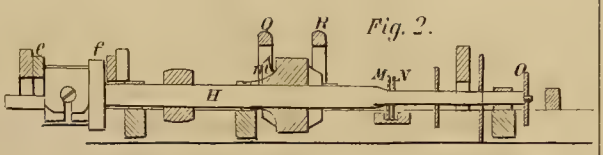

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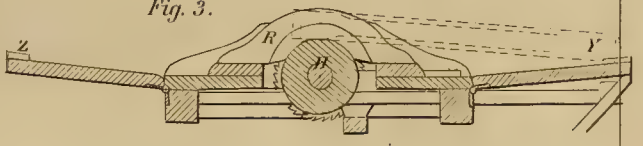

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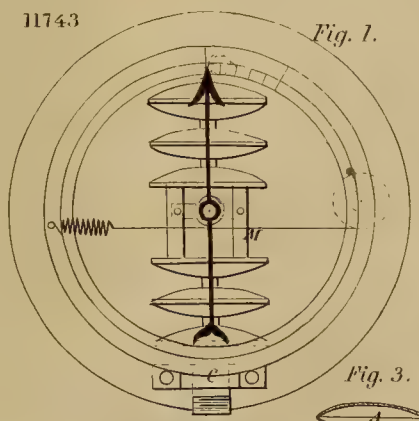

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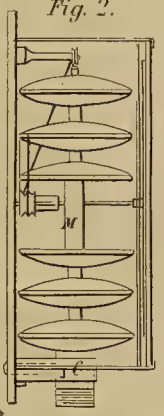

Fig. 3.

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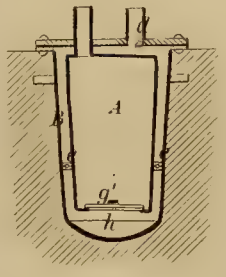

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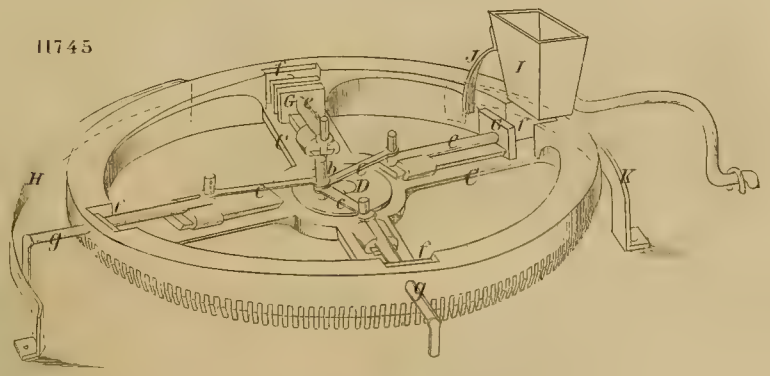

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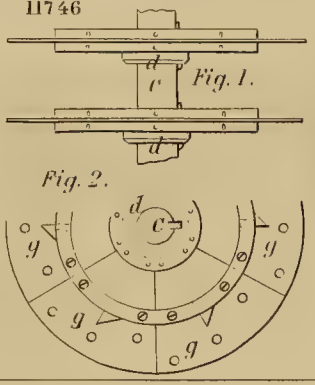

Fig. 1.

Fig. 2.

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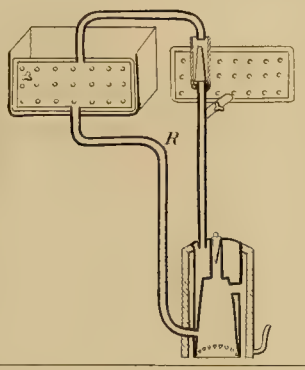

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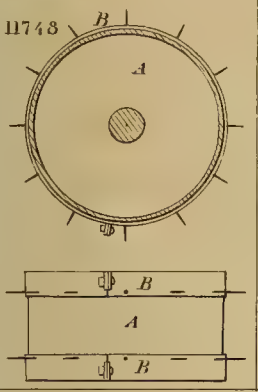

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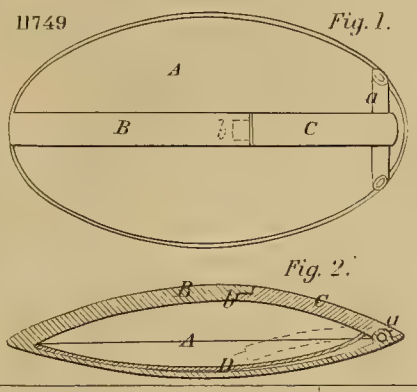

Fig. 1.

Fig. 2.

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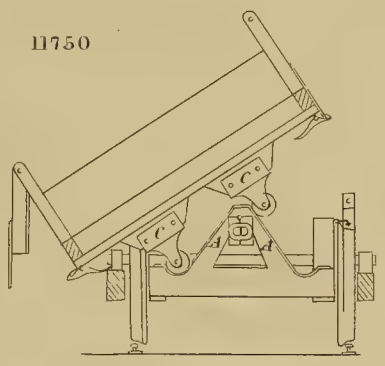

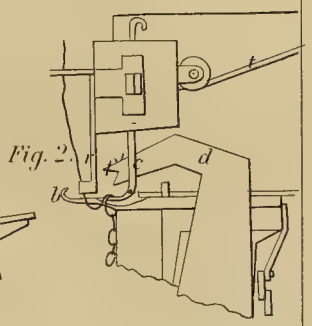

Fig. 2.

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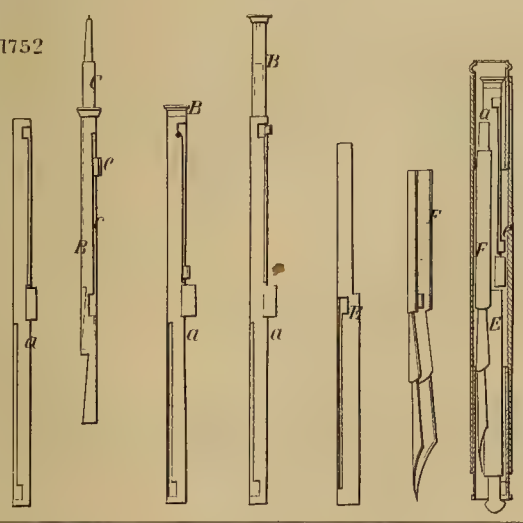

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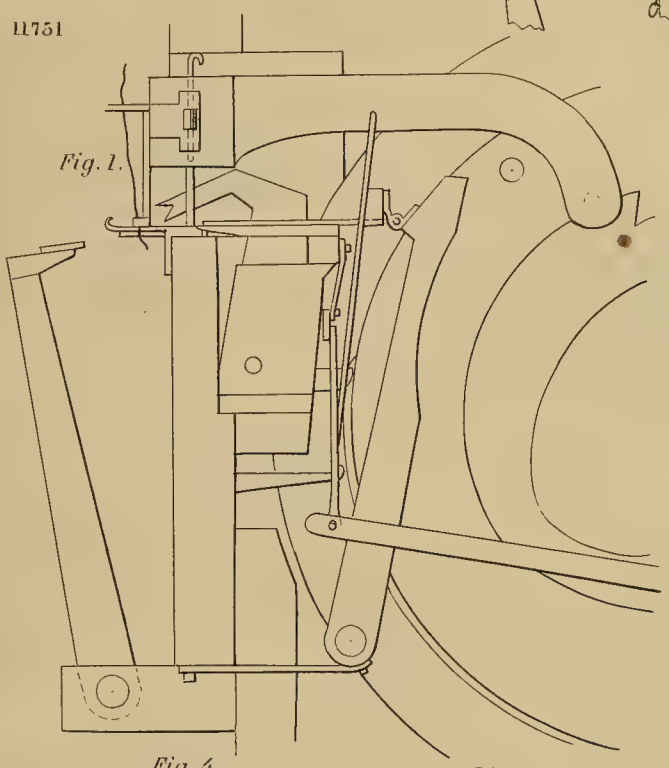
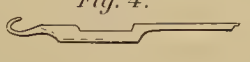


Fig. 1.

Fig. 4.



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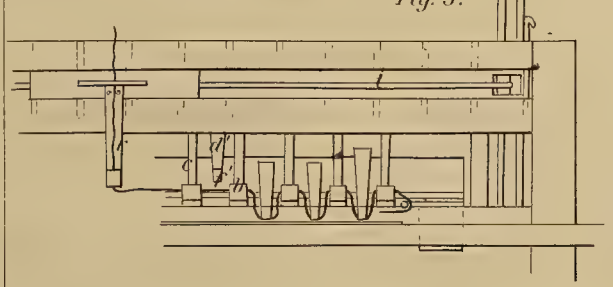

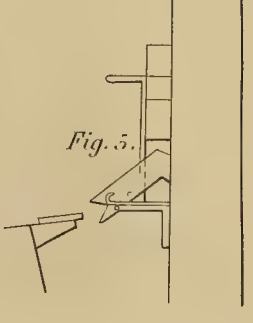

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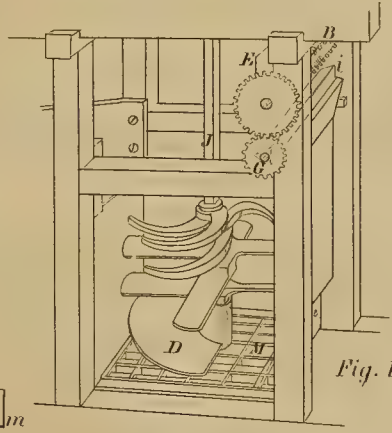
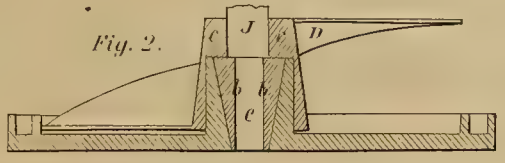


Fig. 3.

Fig. 1.

Fig. 2.



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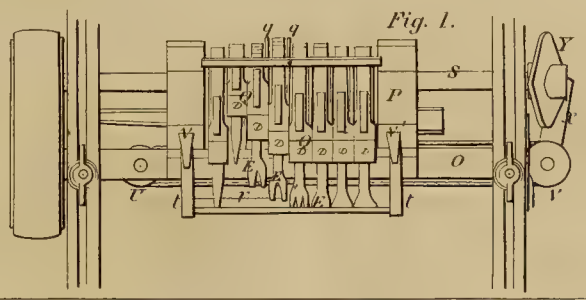

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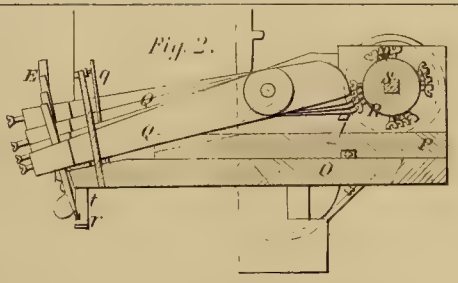

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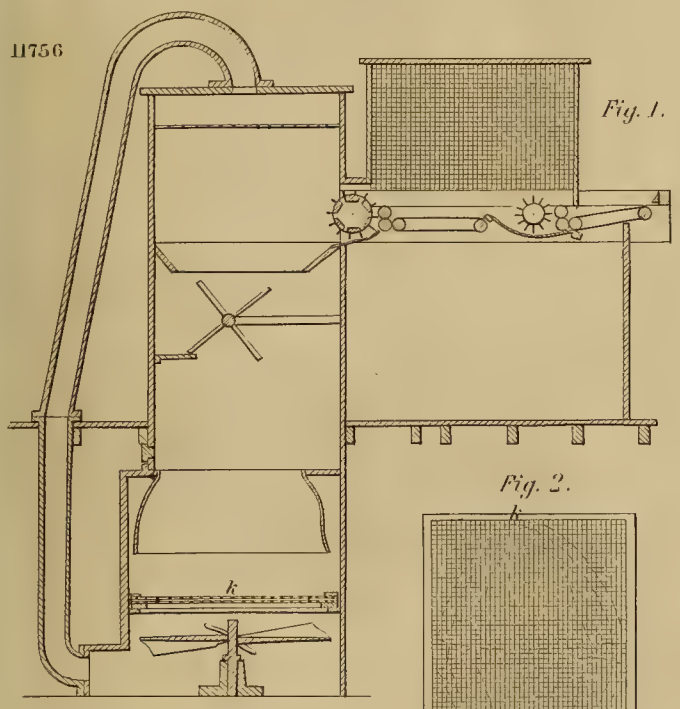

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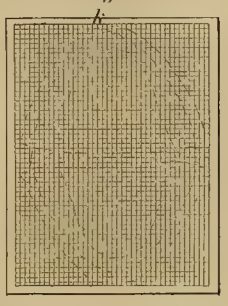

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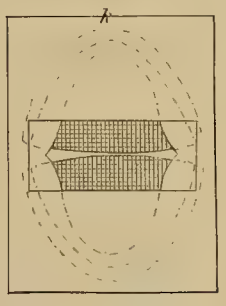

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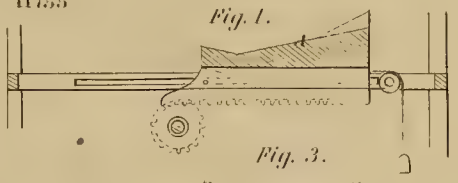

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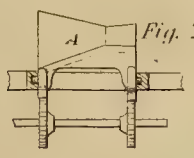

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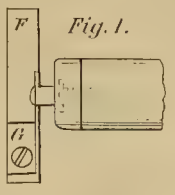

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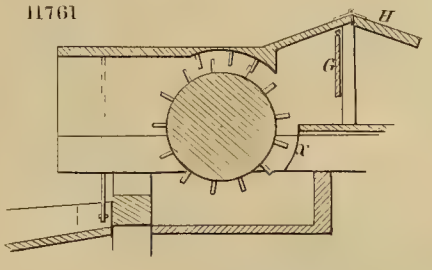

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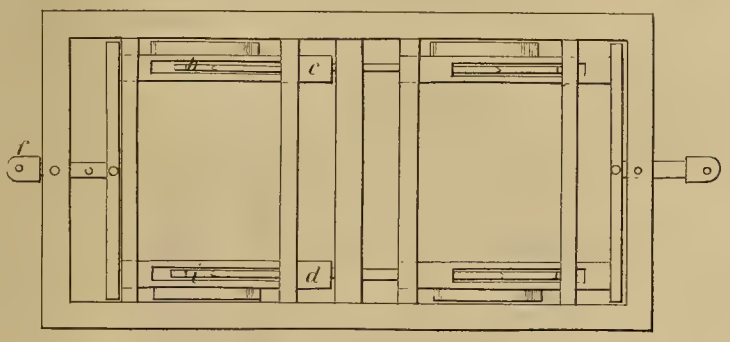

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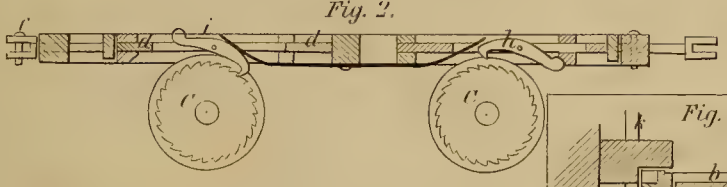

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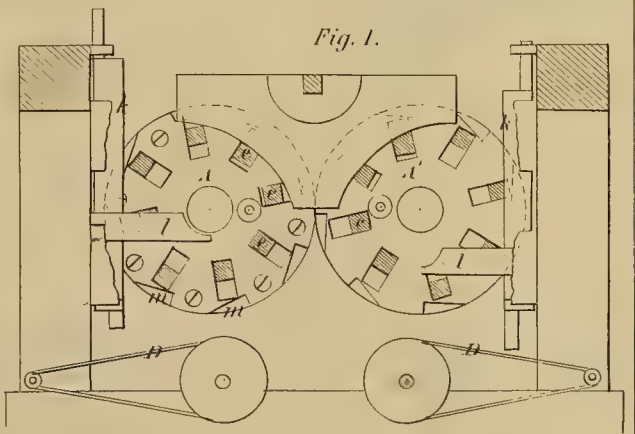

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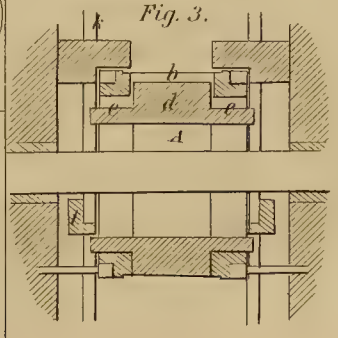

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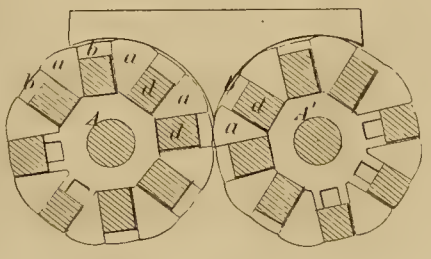

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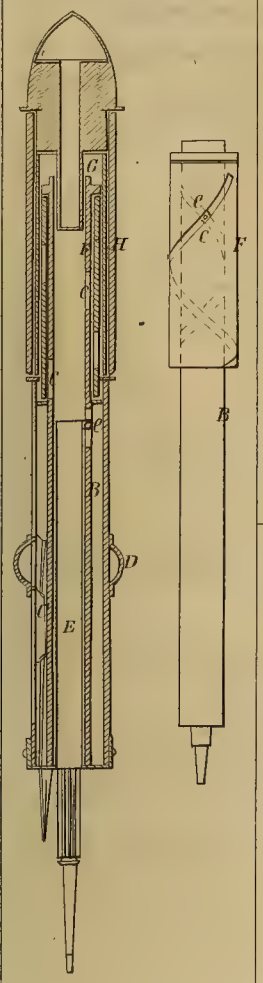

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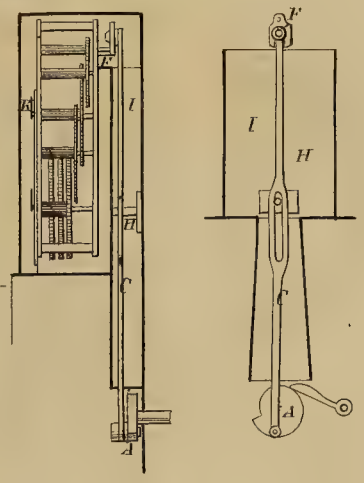

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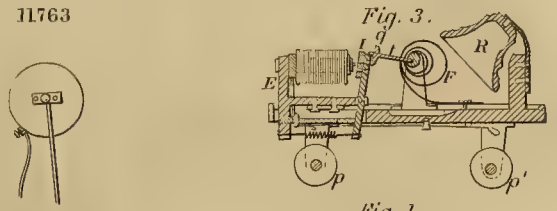

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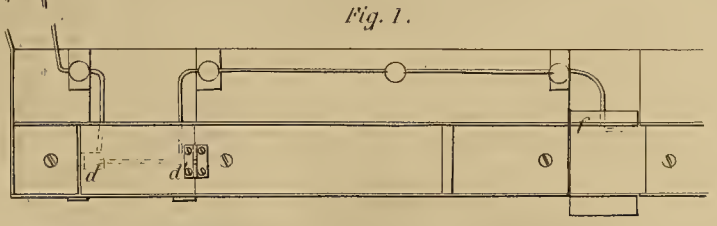

Fig. 1.

Fig. 2.

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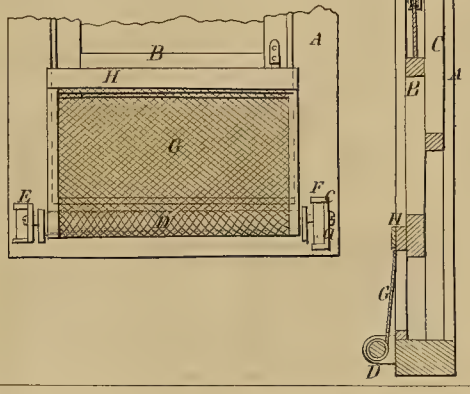

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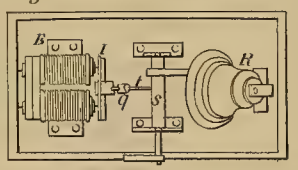

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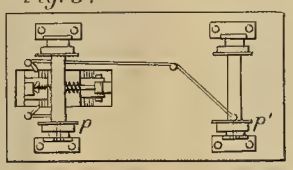

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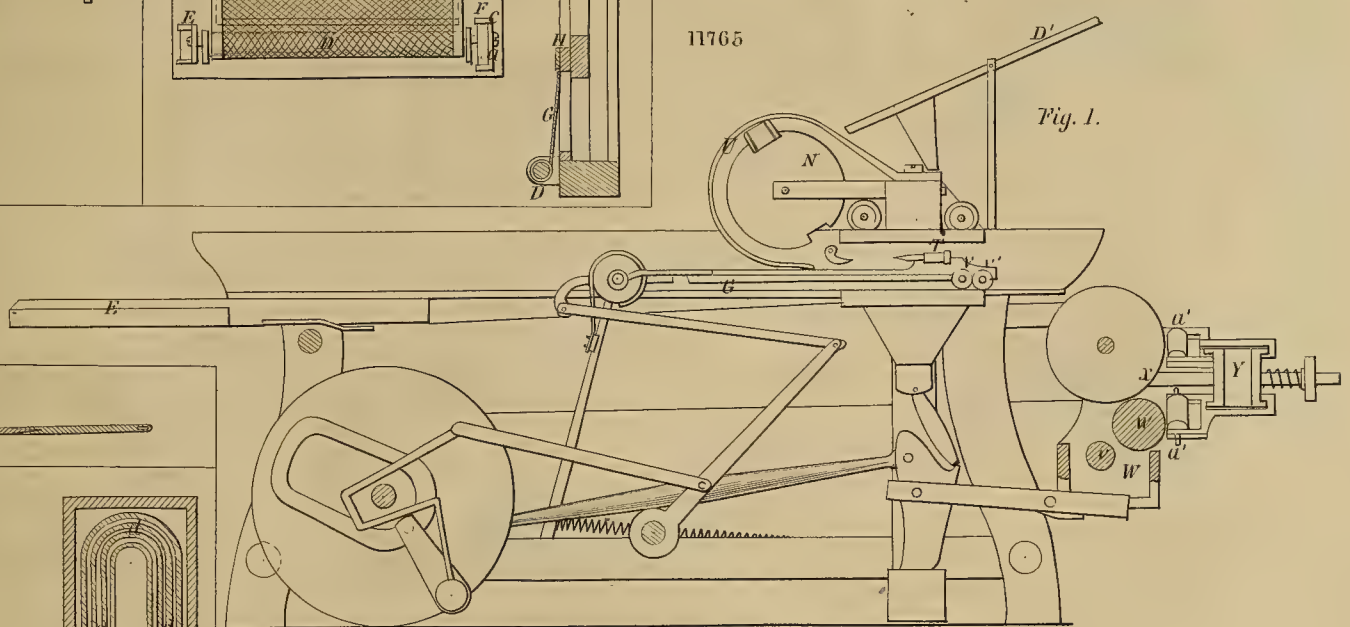

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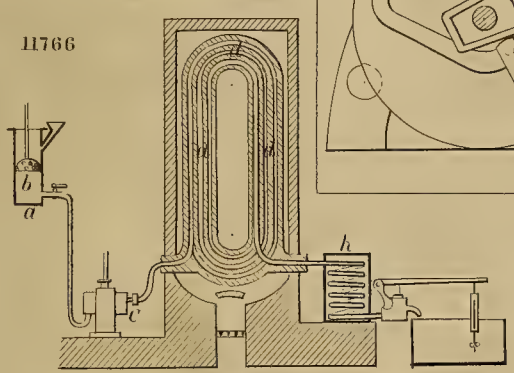

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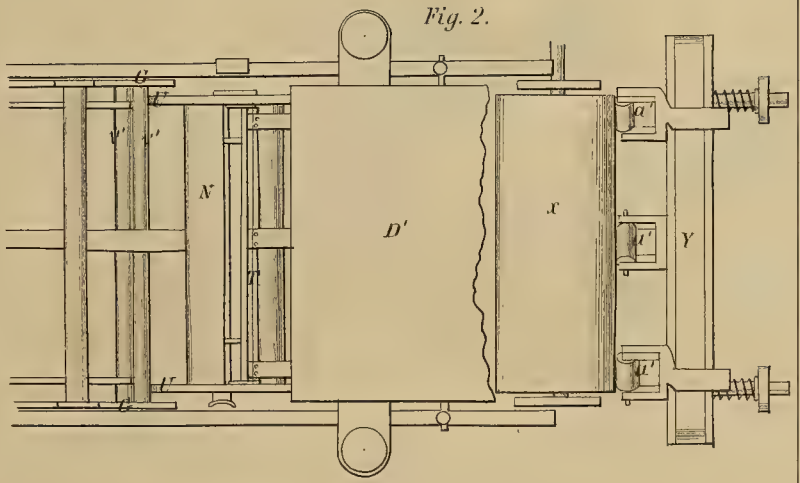

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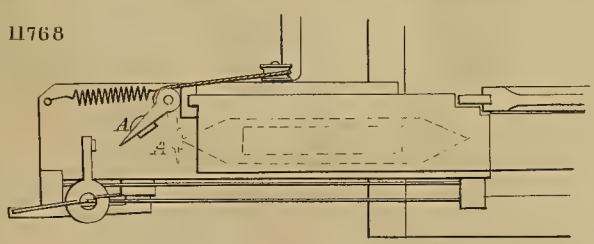

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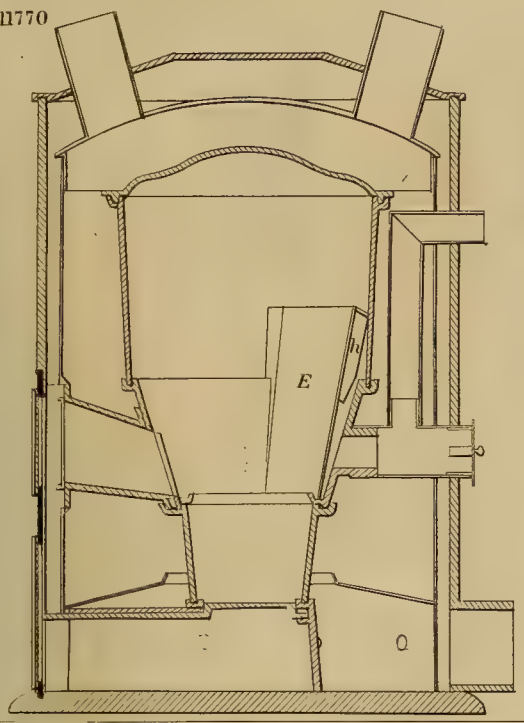

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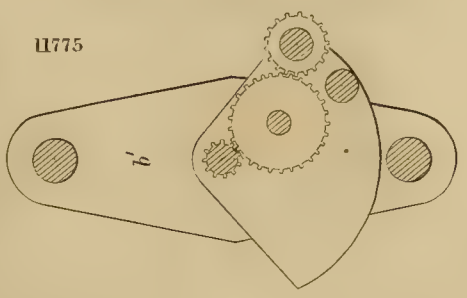

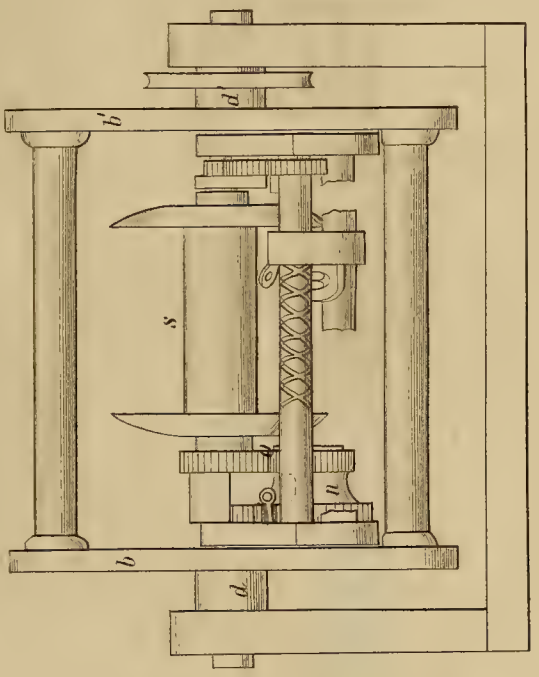

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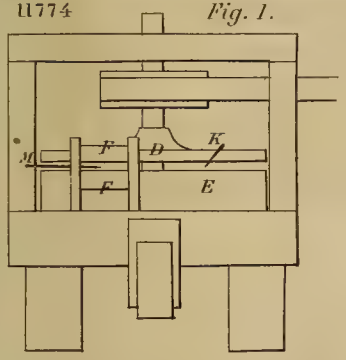

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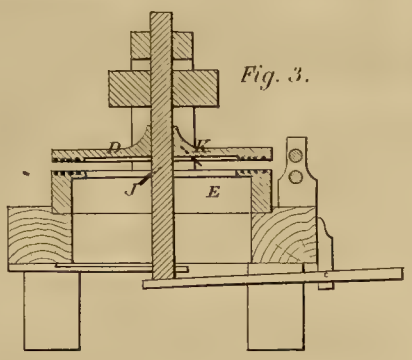

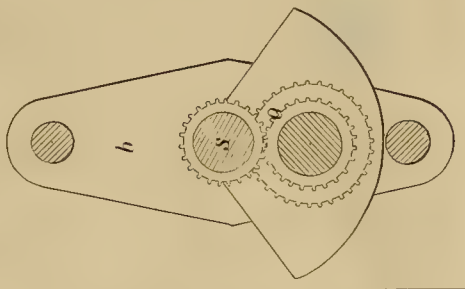

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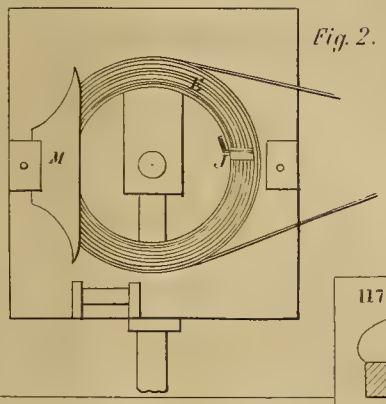

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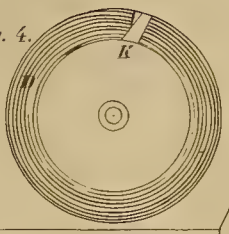

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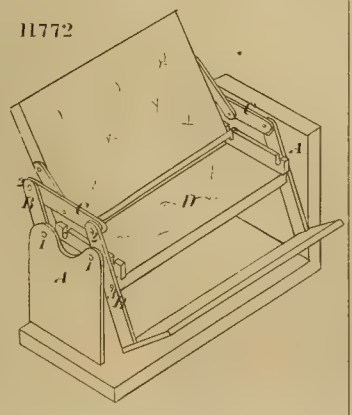

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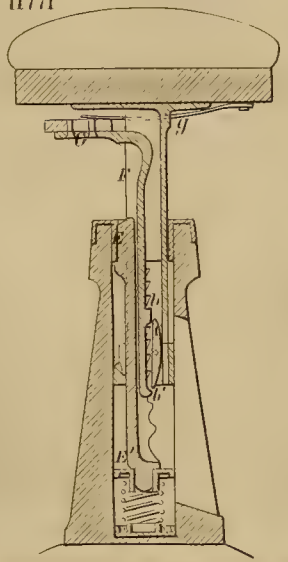

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Fig. 2.

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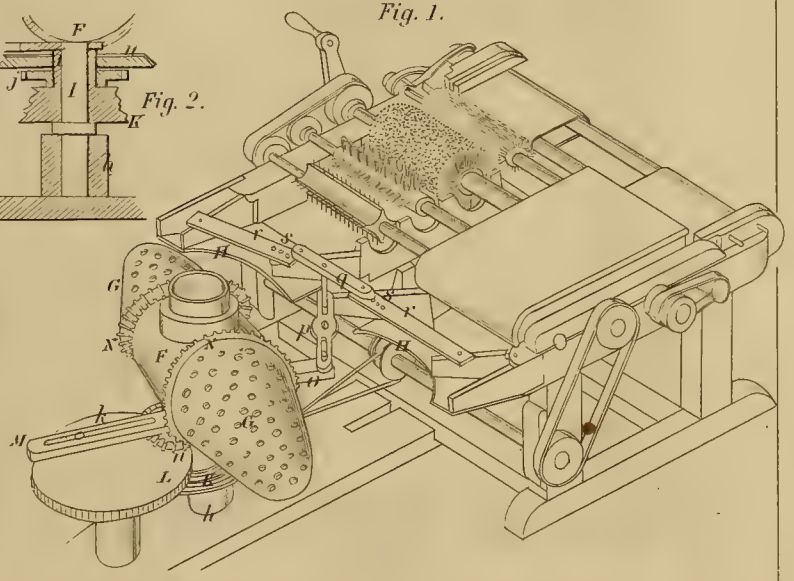

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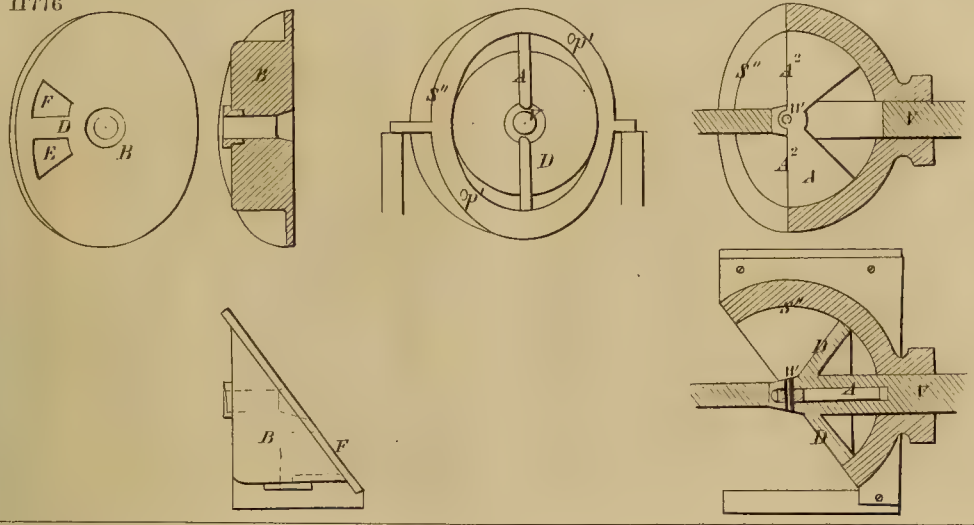

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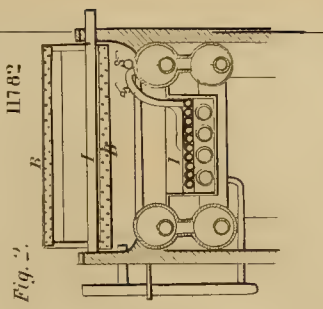

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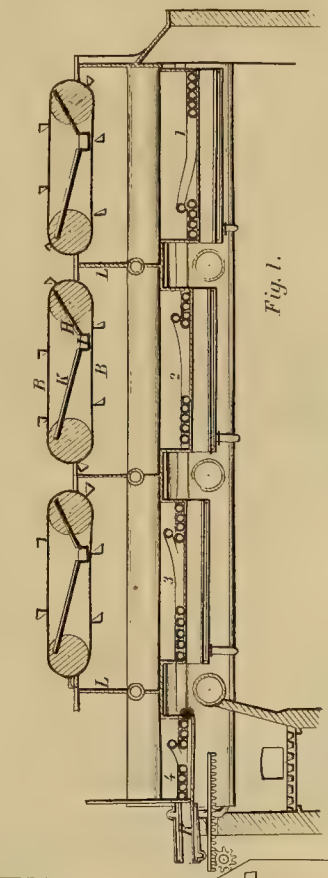

Fig. 1.

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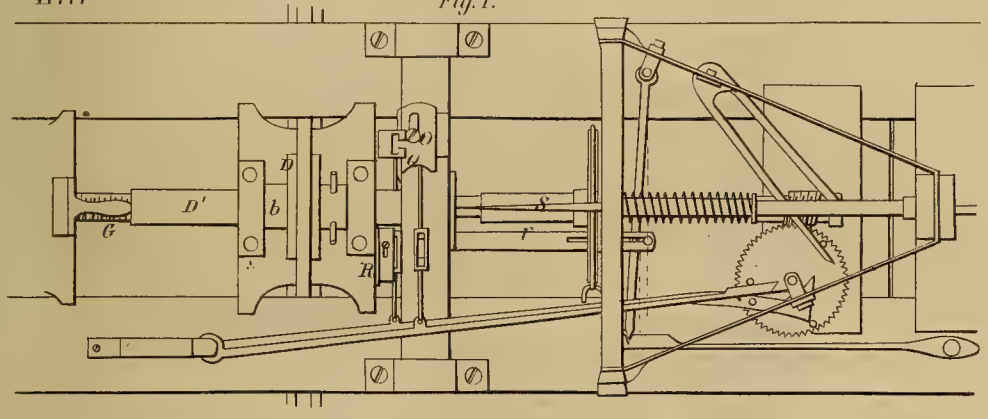
Fig. 1.



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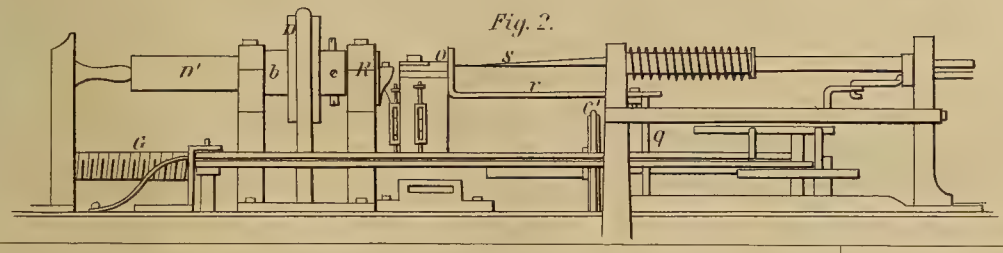

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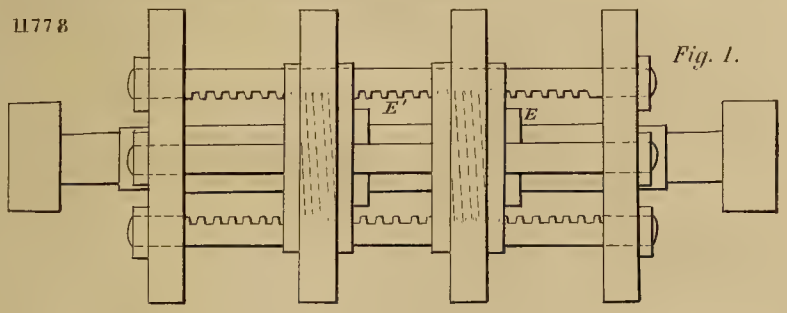

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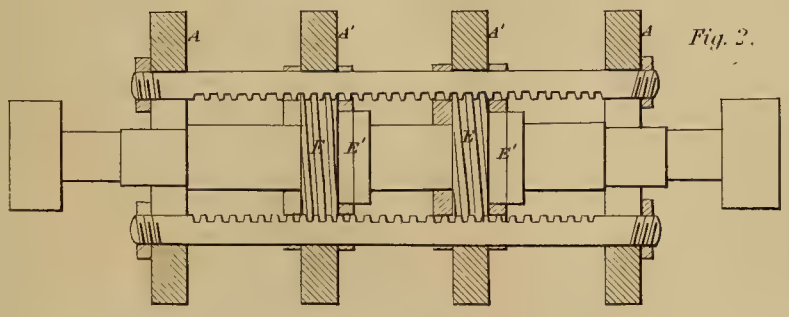

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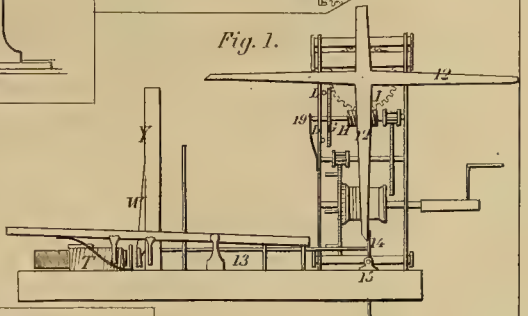

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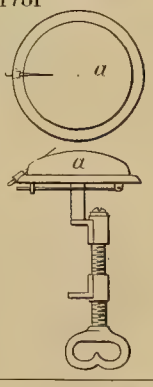

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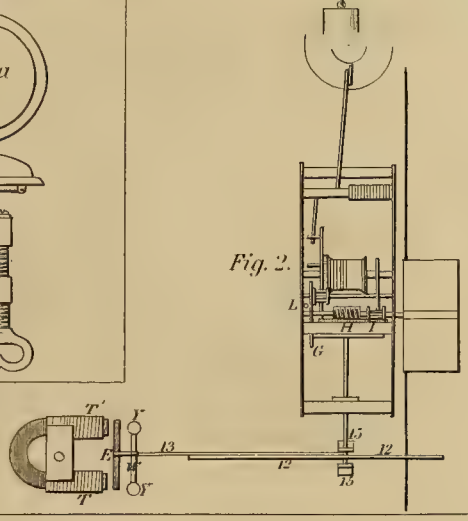

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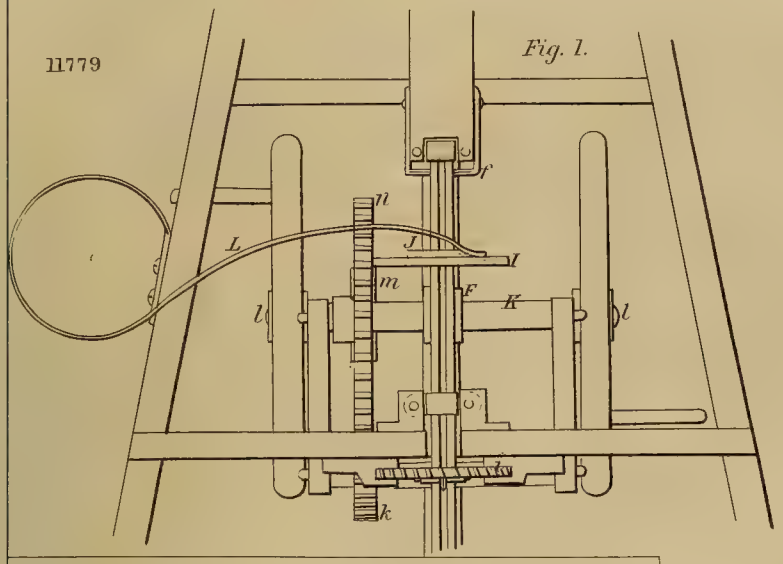

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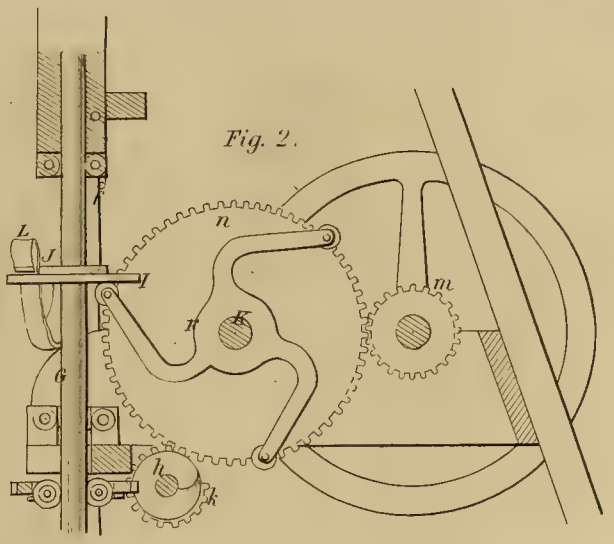

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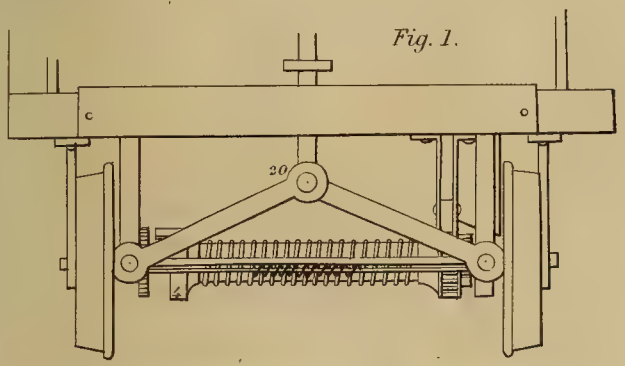

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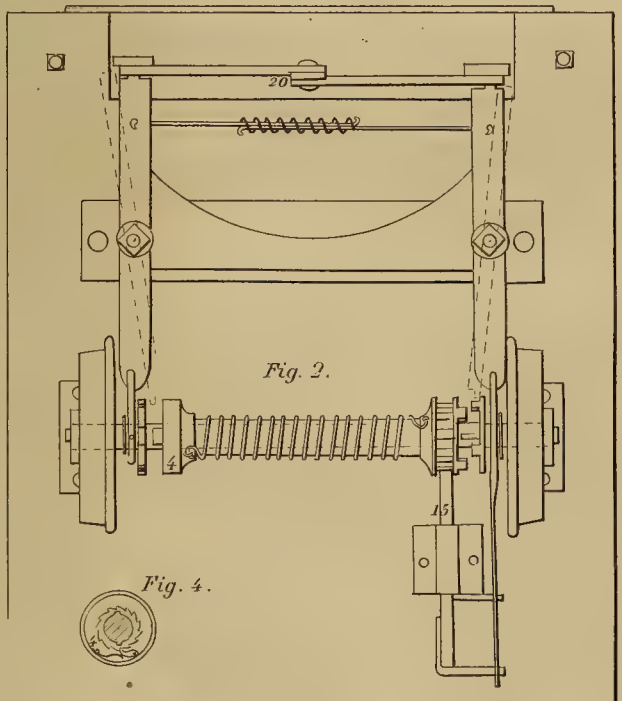

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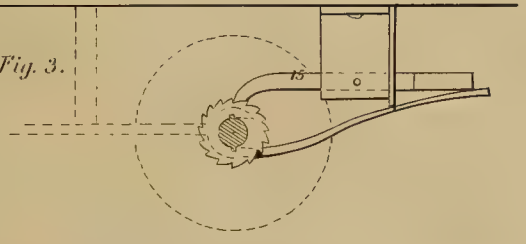

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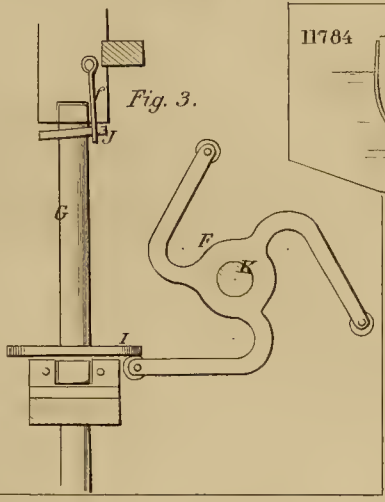

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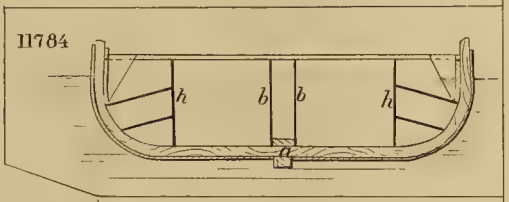

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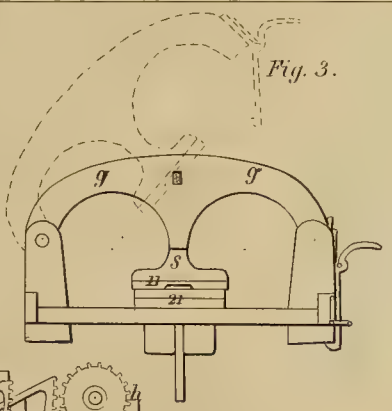

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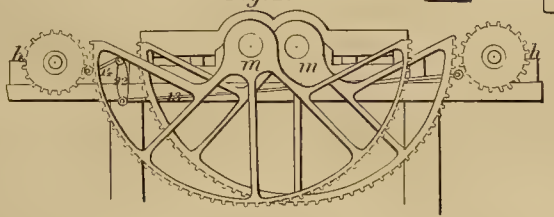

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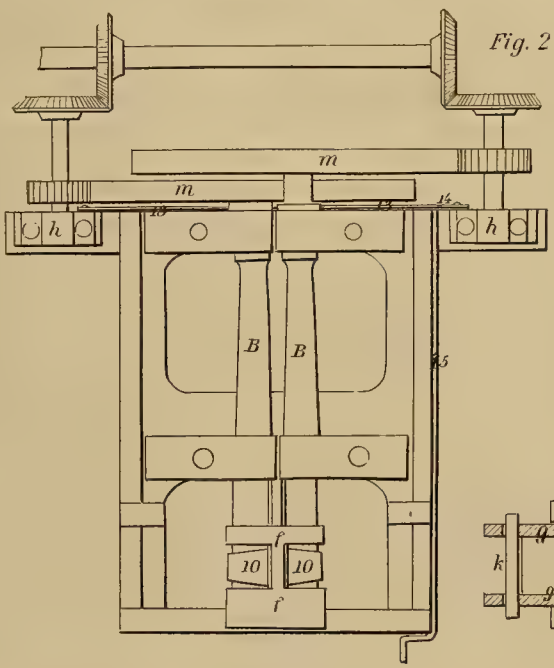

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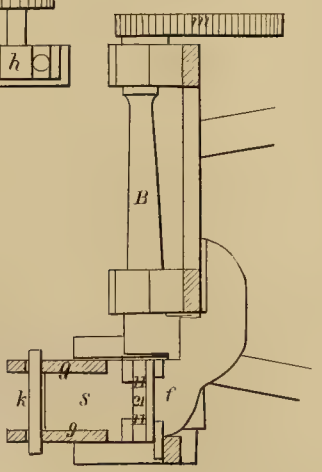

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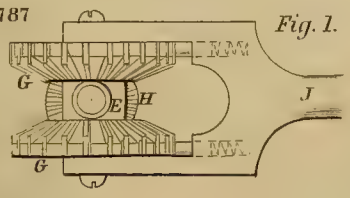

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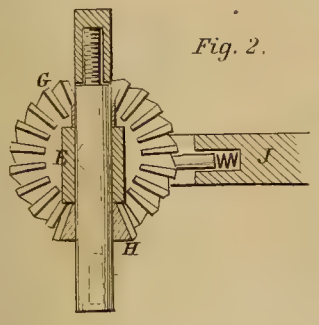

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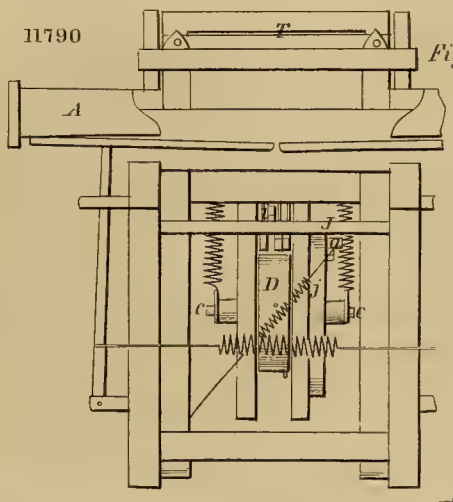

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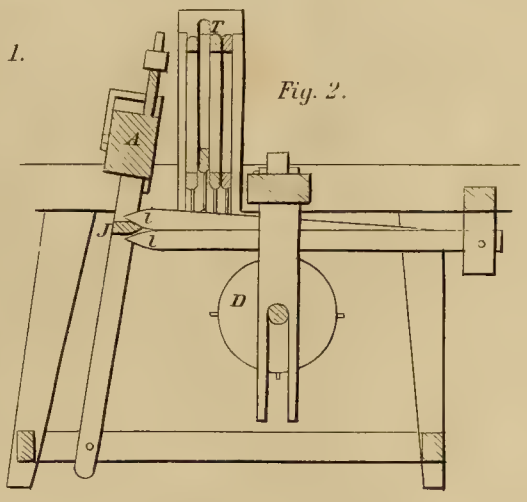

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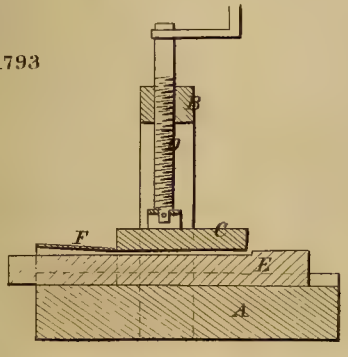

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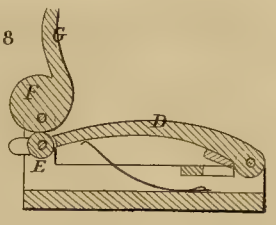

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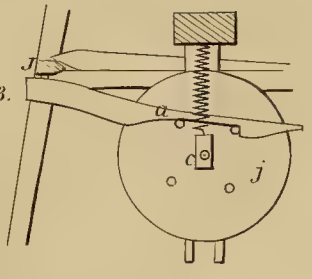

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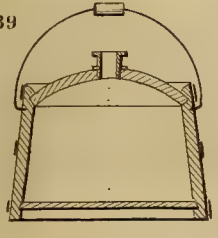

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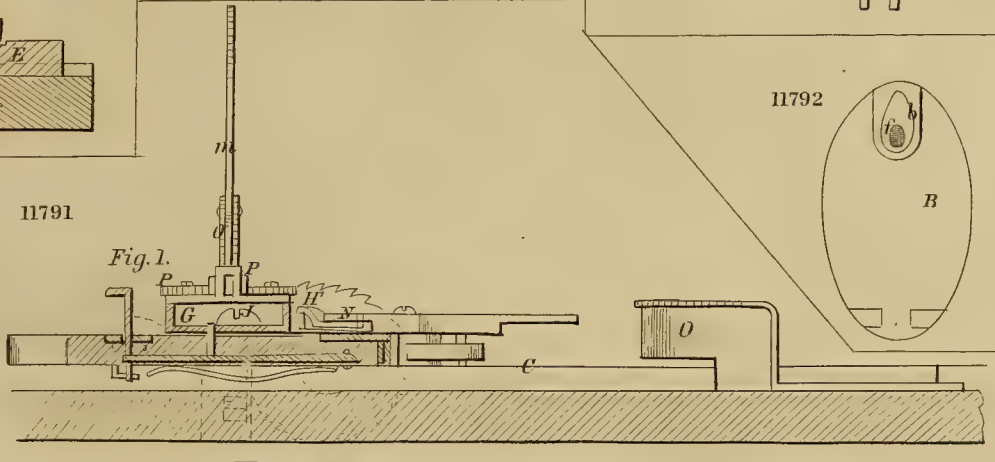

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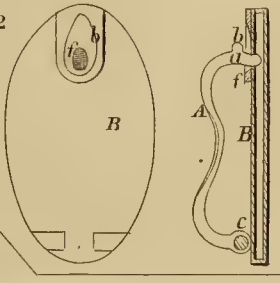

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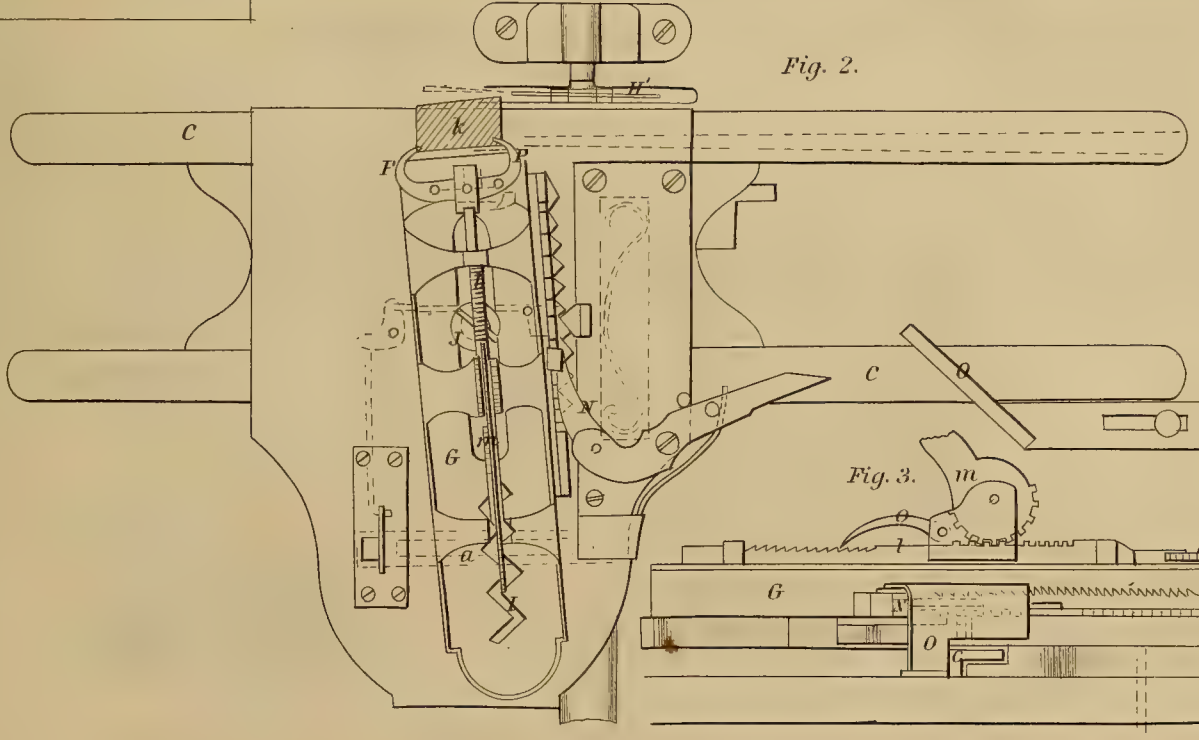

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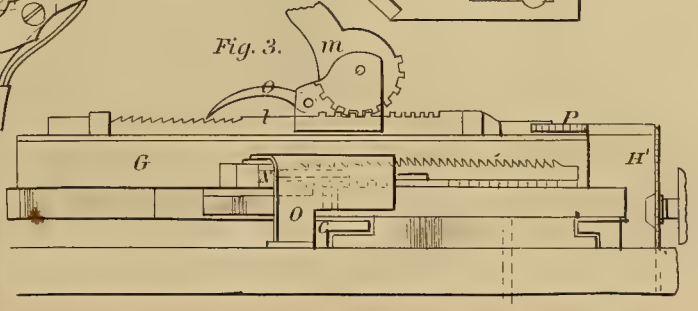

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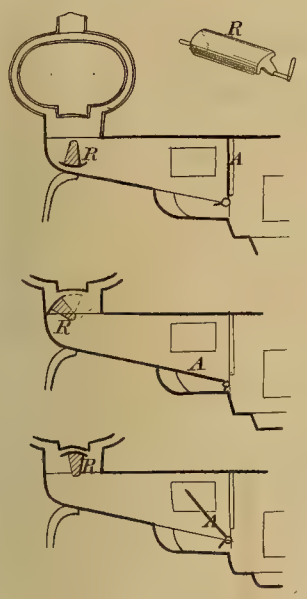

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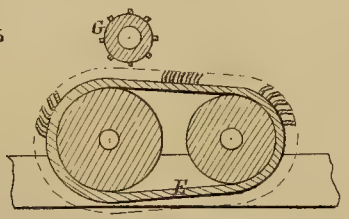

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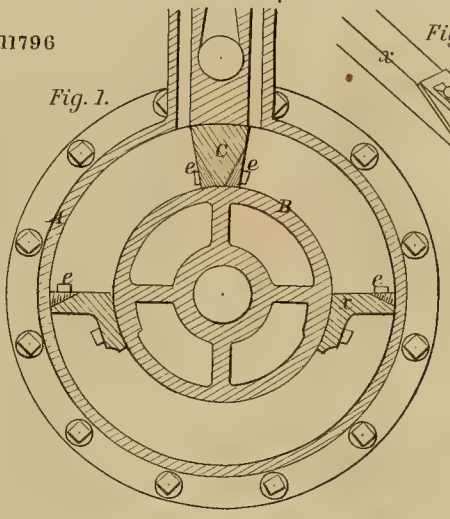

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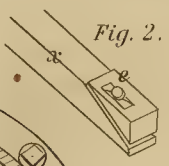

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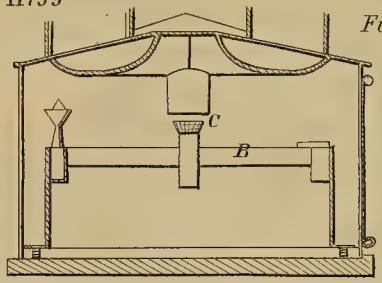

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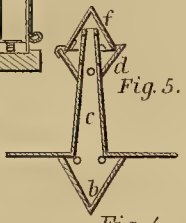

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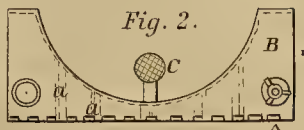

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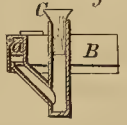

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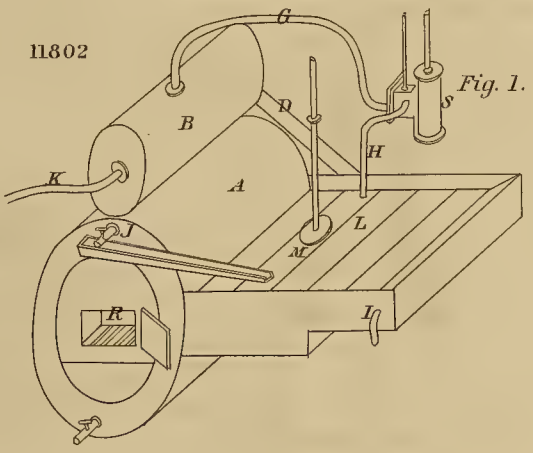

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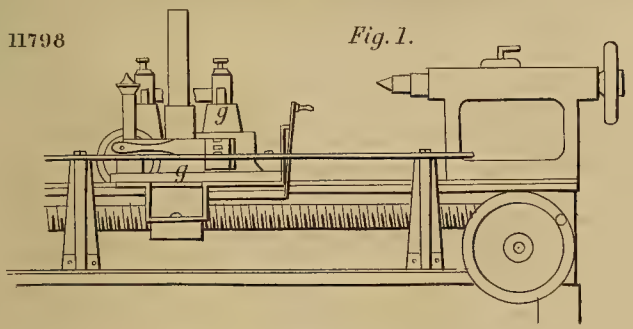

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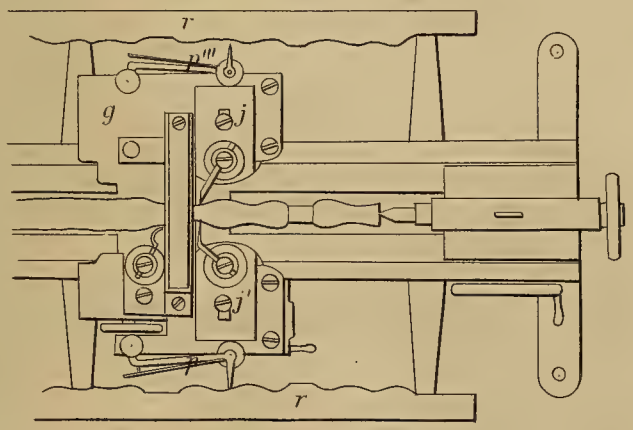

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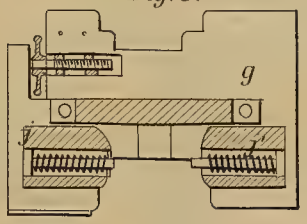

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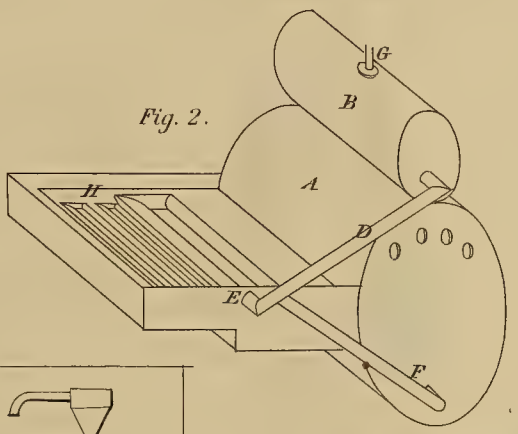

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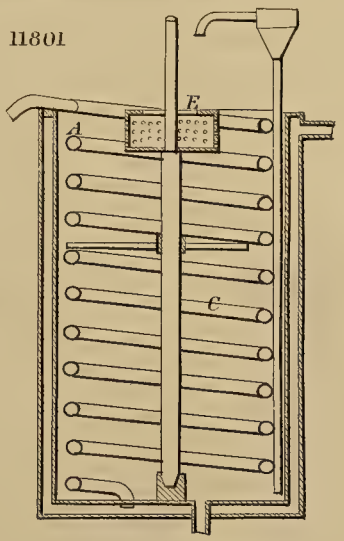

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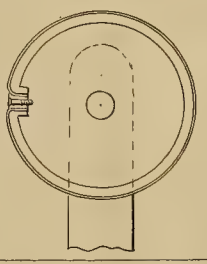

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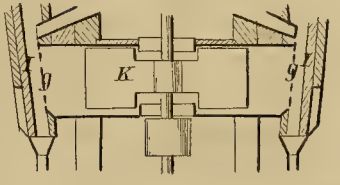

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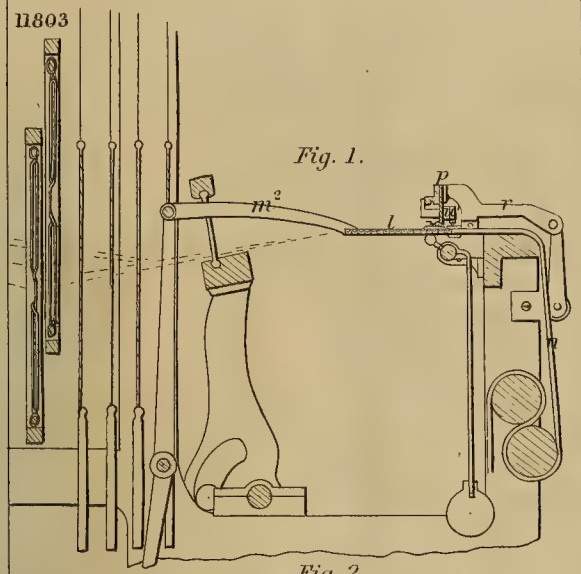

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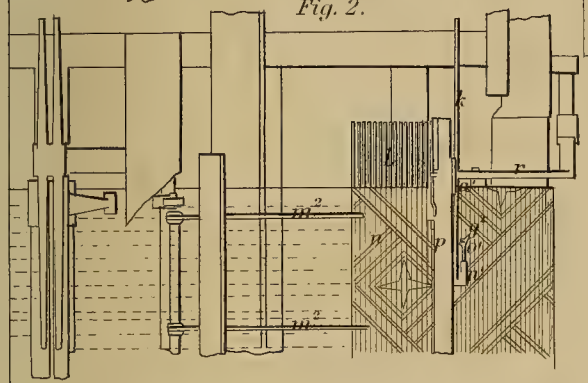

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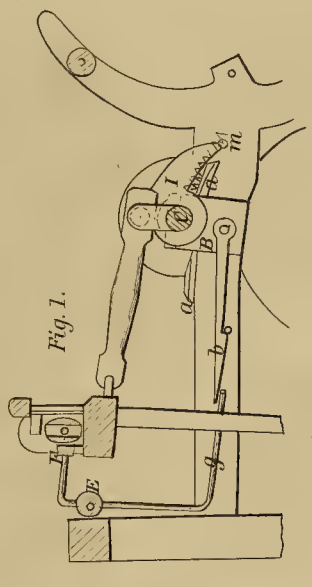

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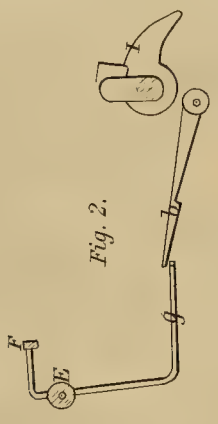

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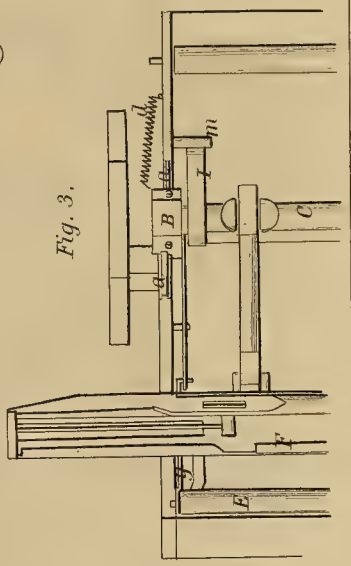

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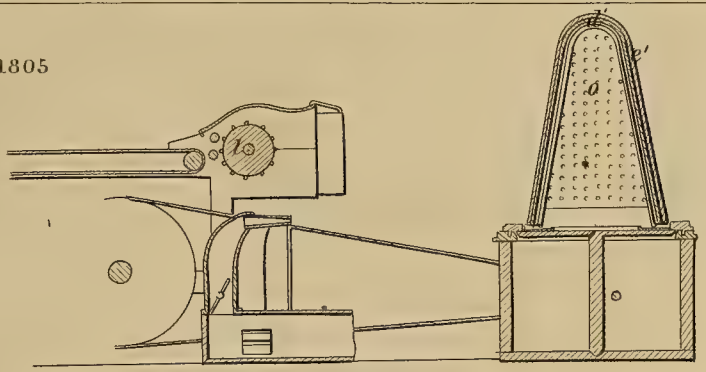

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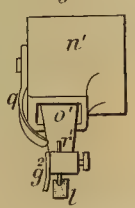

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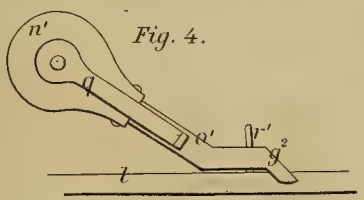

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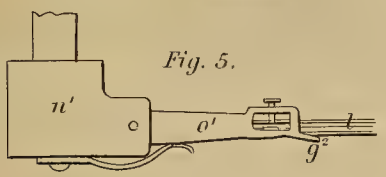

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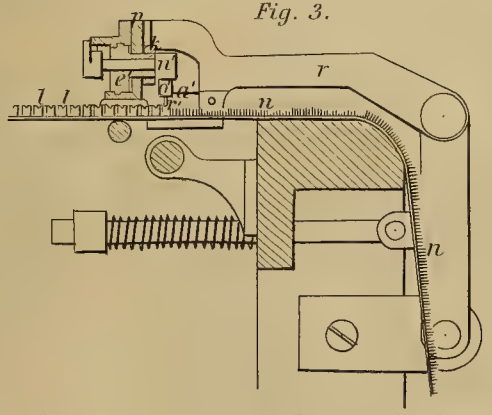

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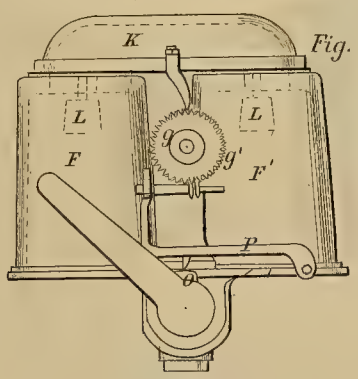

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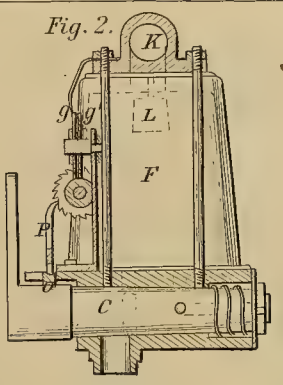

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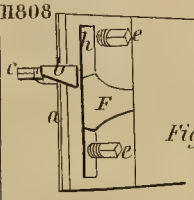

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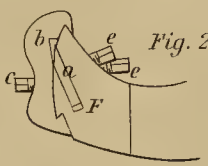

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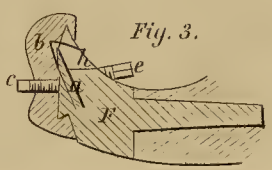

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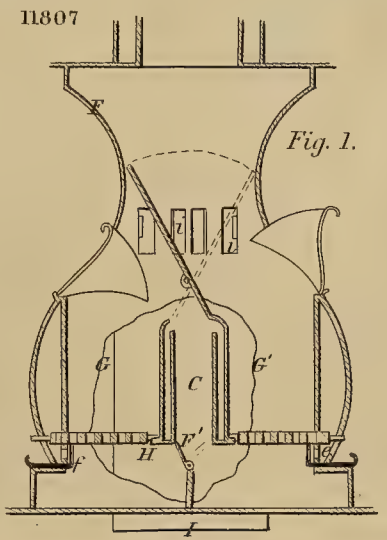

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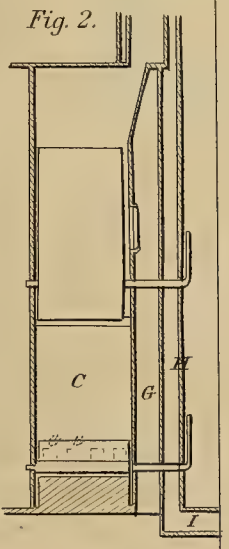

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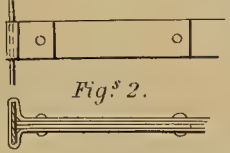

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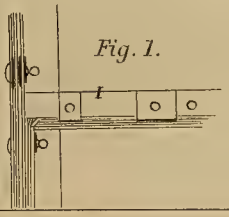

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Fig. 3.

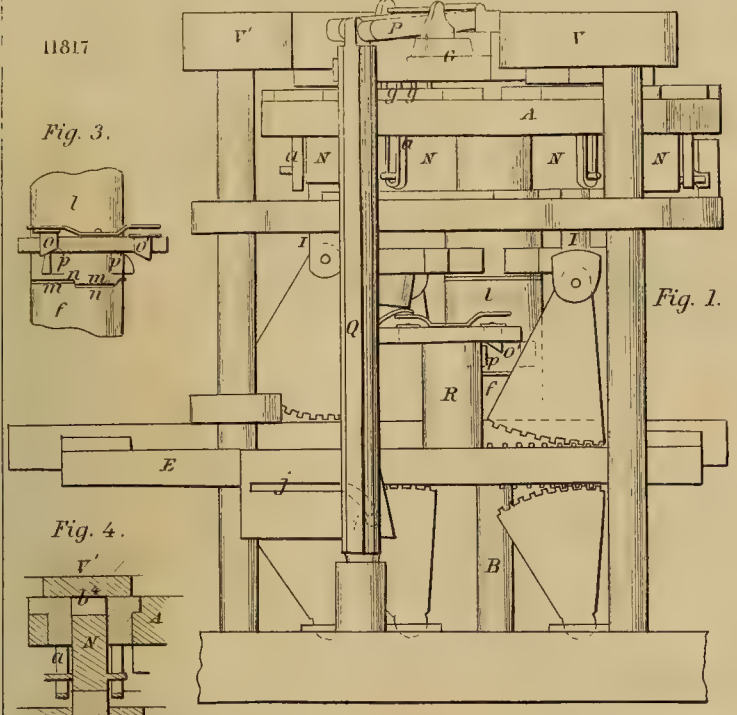

Fig. 1.

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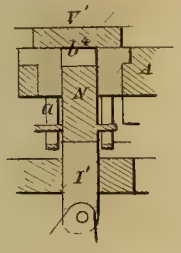

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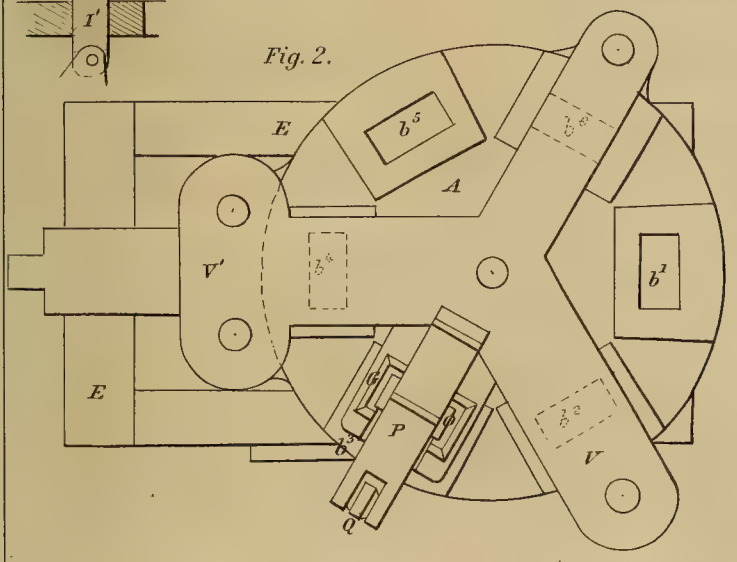

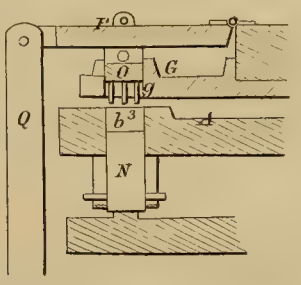

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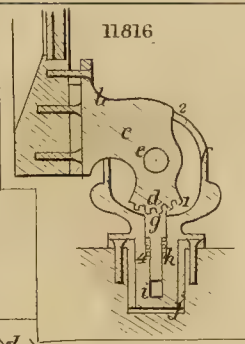

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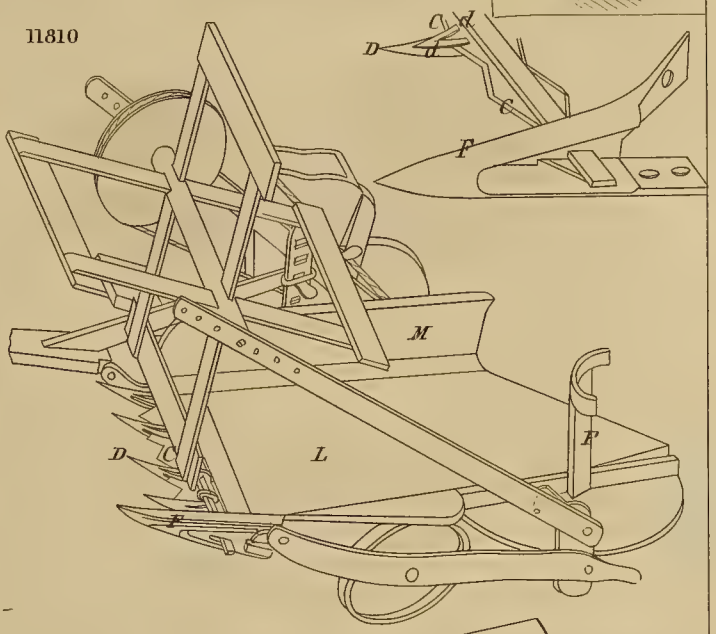

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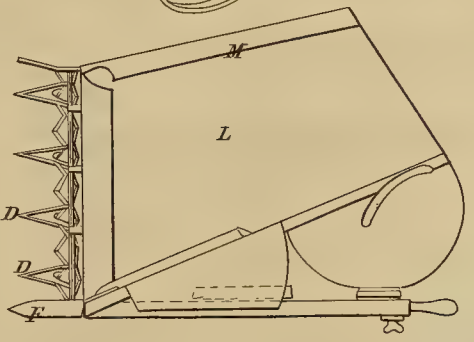

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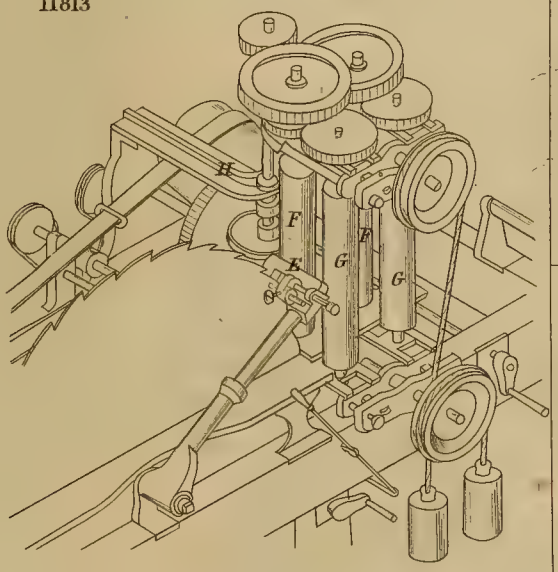

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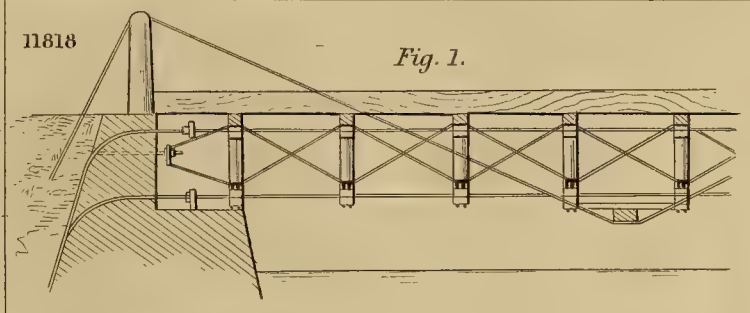

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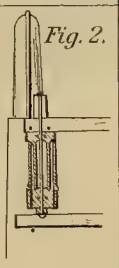

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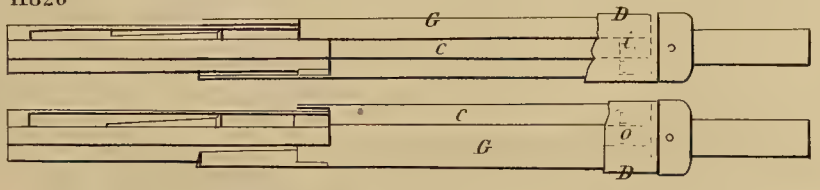
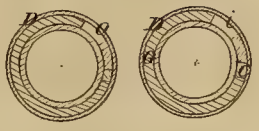

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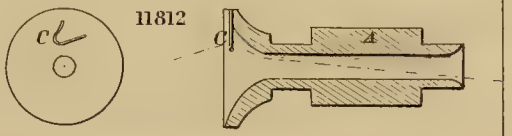

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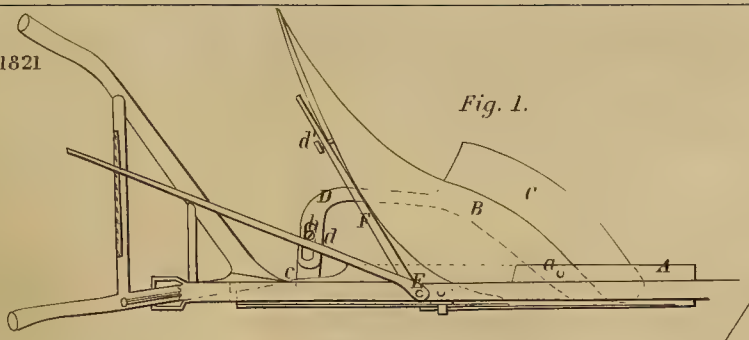

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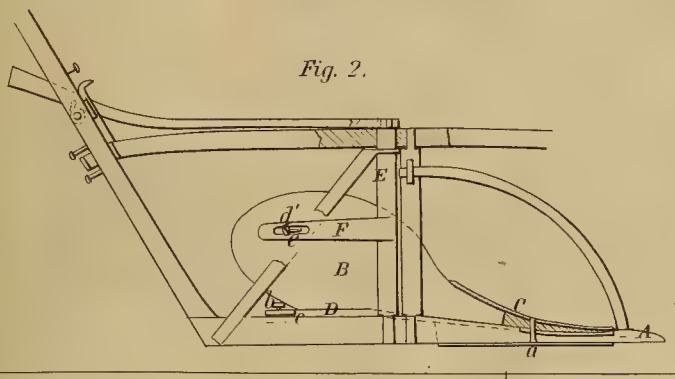

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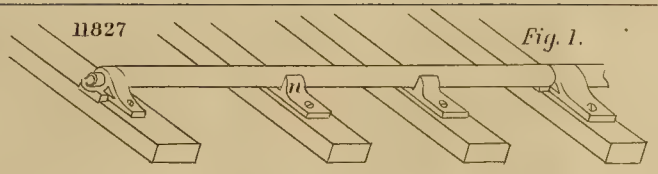

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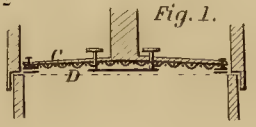

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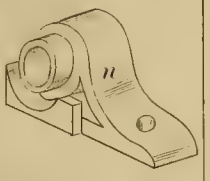

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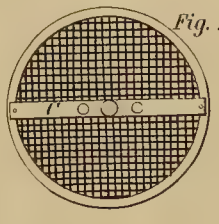

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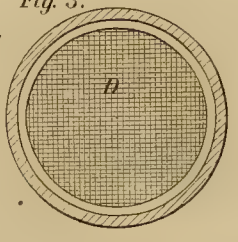

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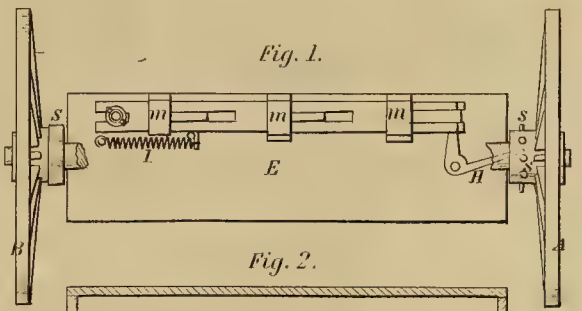

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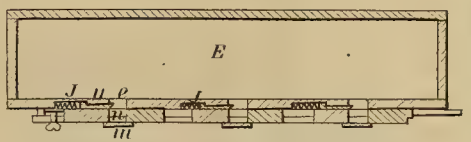

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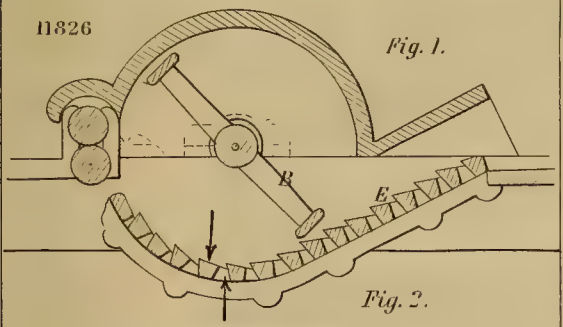

Fig. 2.

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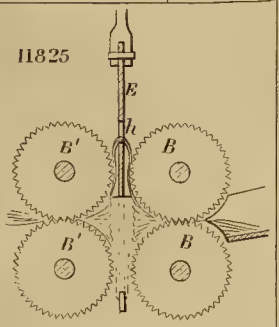

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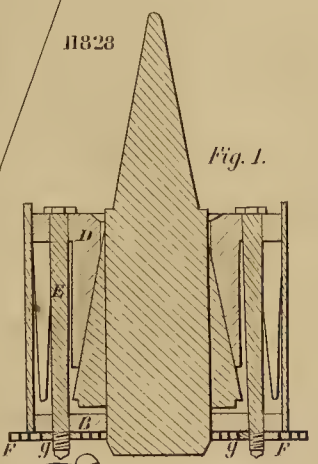

Fig. 2.

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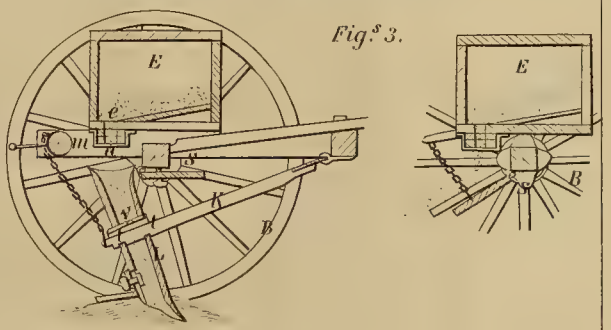

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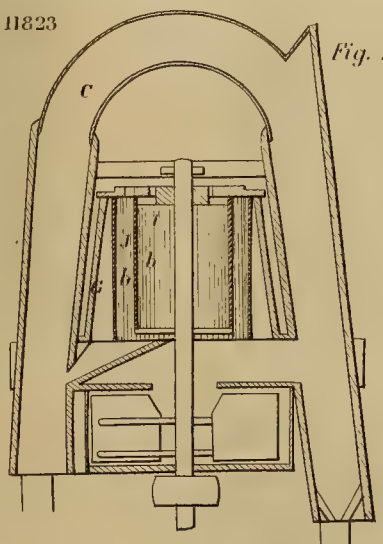

Fig. 2.

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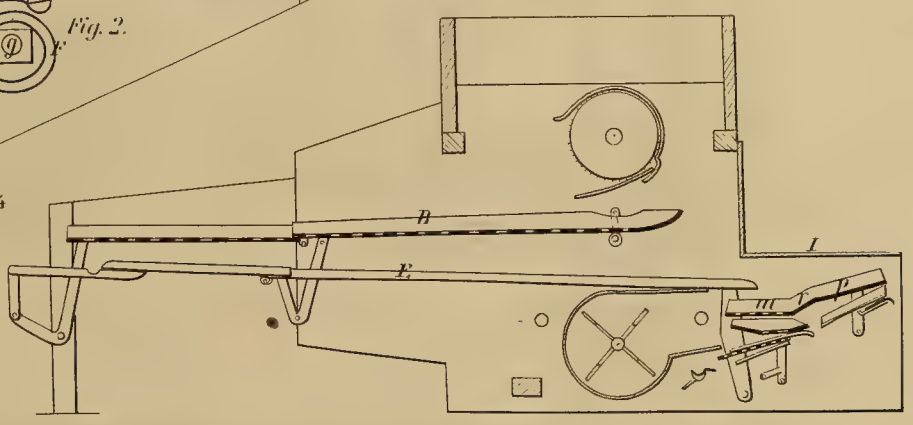

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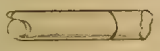
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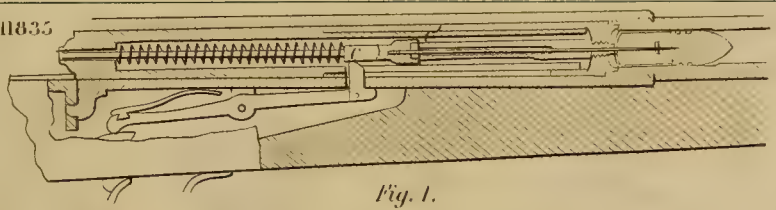

Fig. 1.

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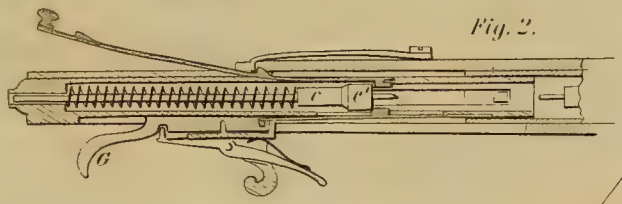

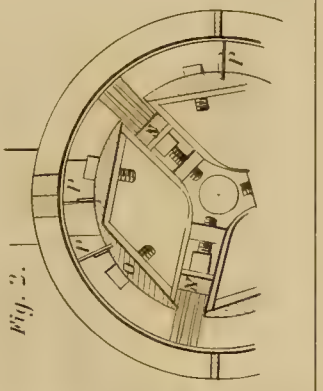

Fig. 3.

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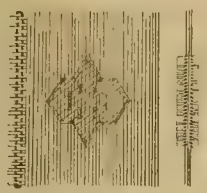

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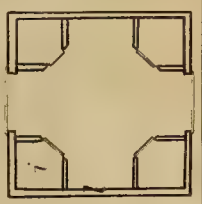

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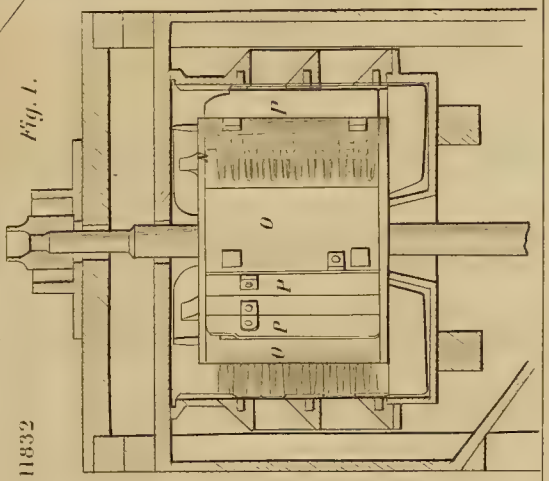

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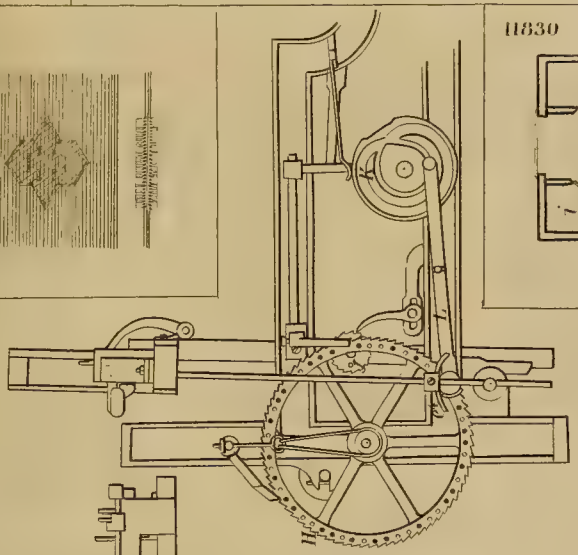

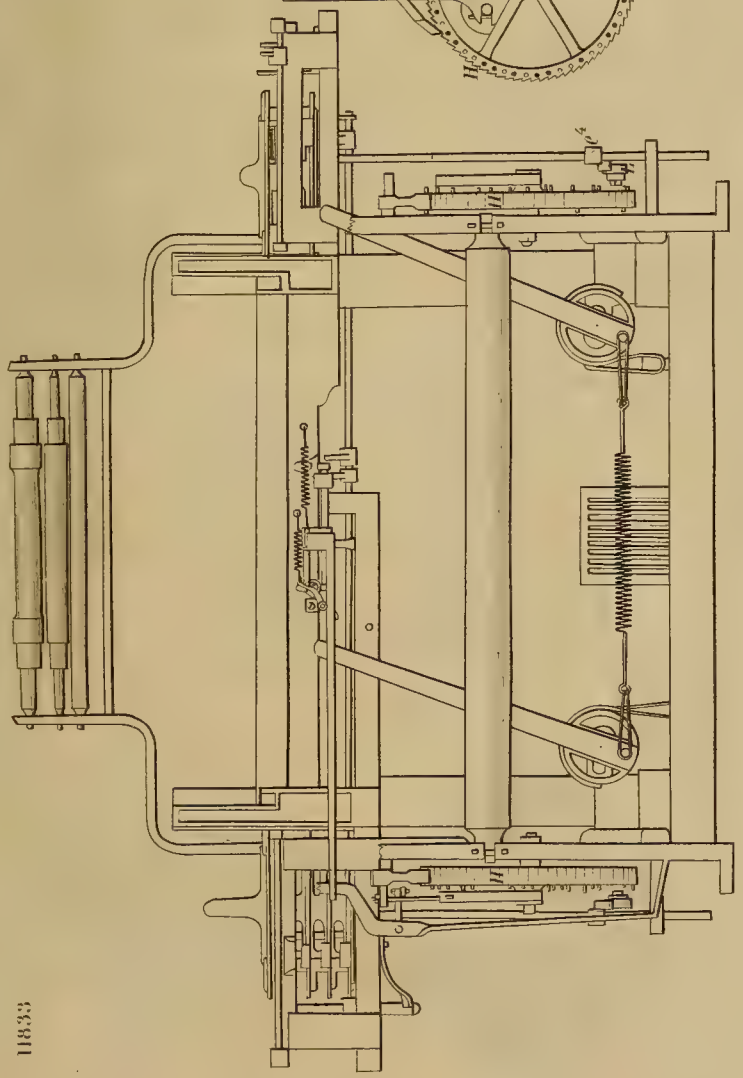

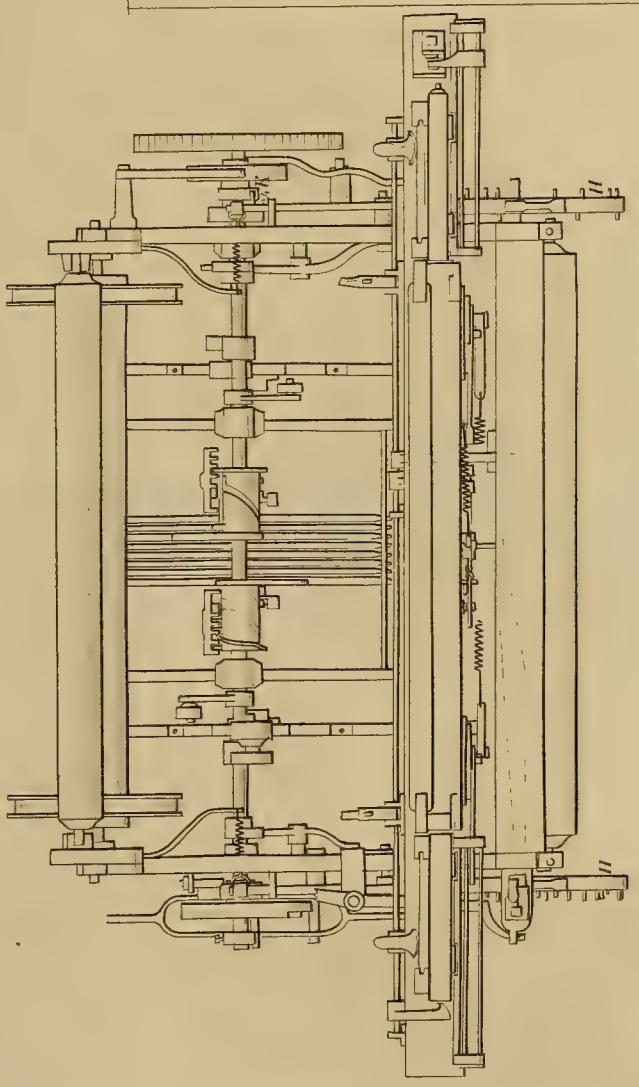

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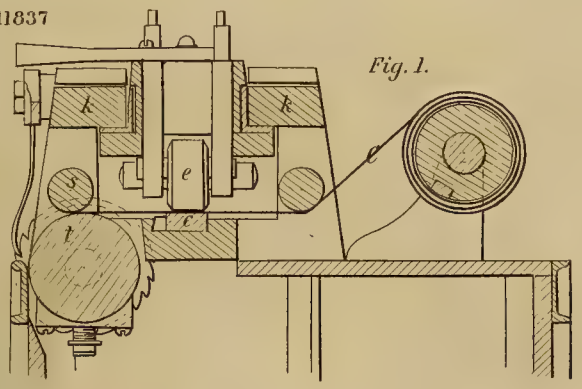

Fig. 1.

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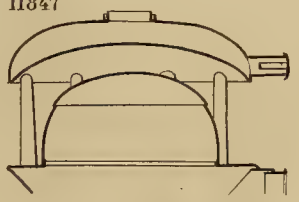

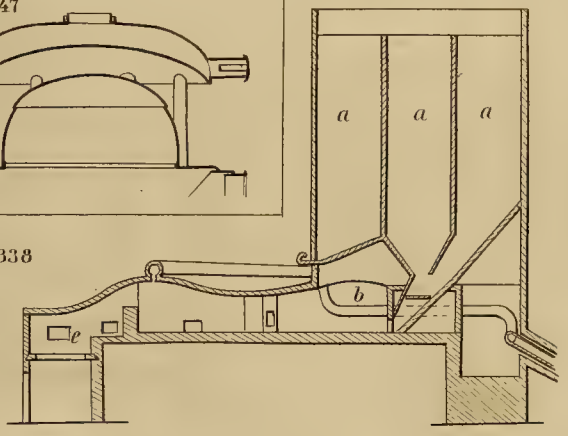

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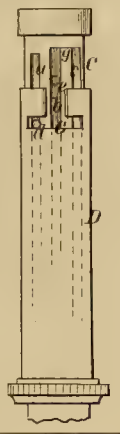

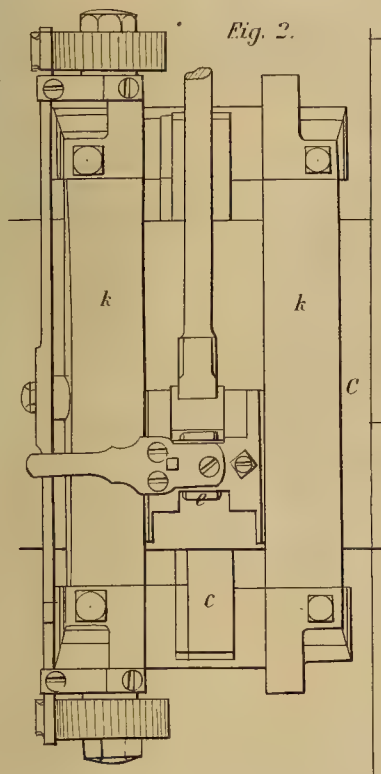

Fig. 2.

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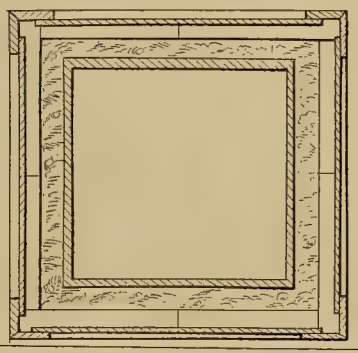

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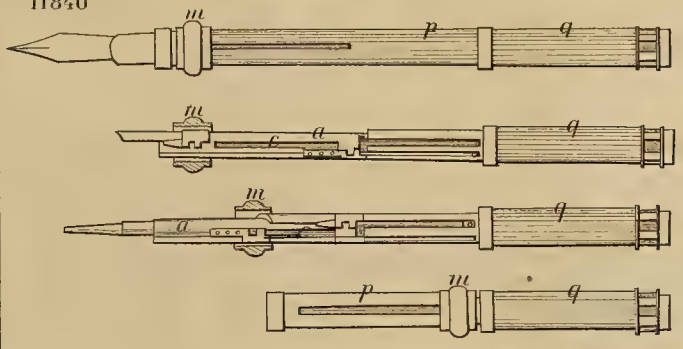

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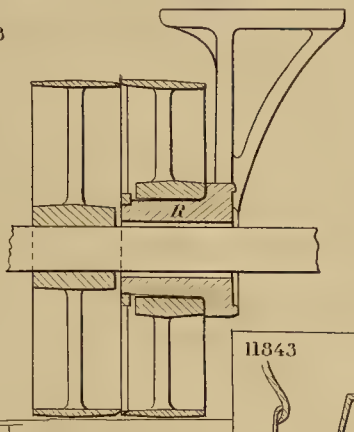

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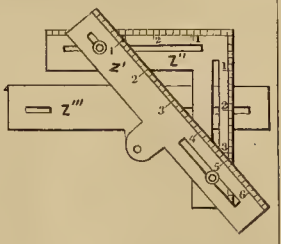

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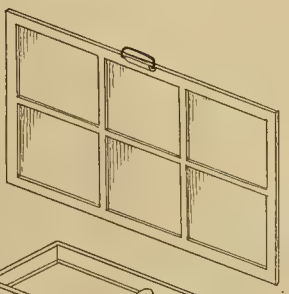

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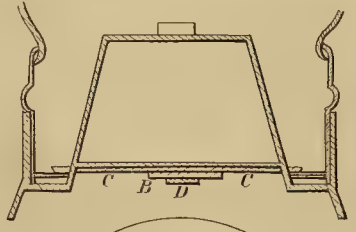

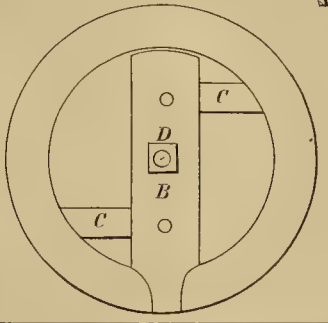

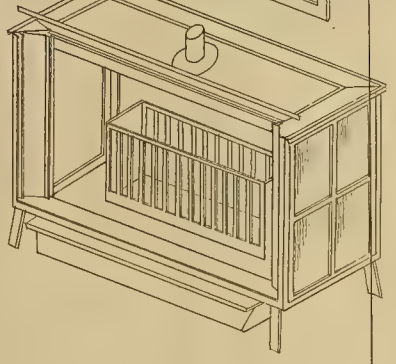

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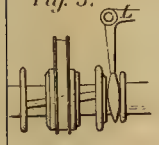

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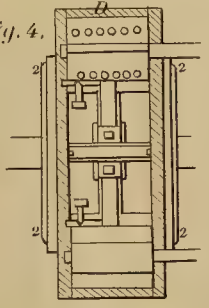

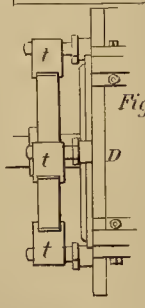

Fig. 5.

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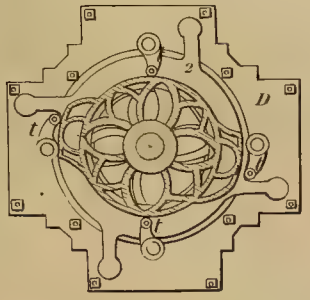

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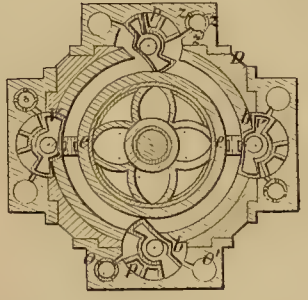

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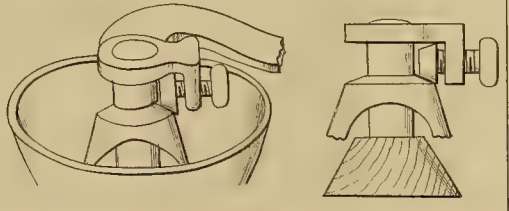

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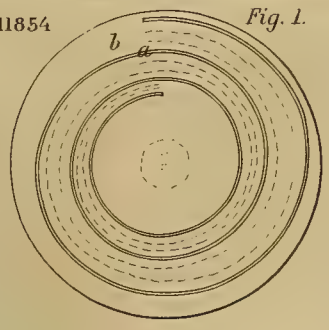

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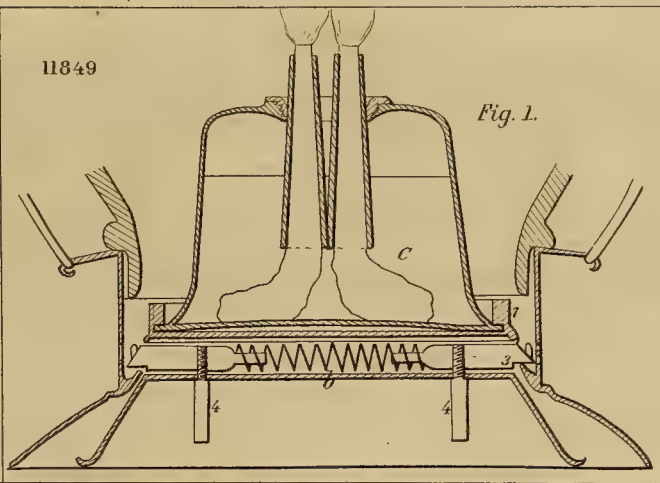

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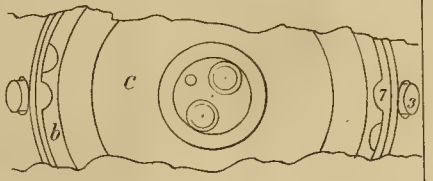

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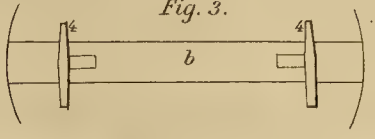

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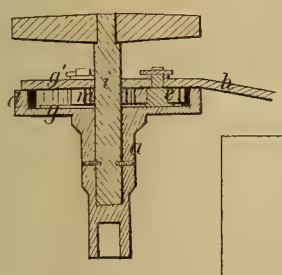

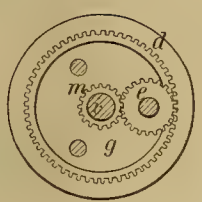

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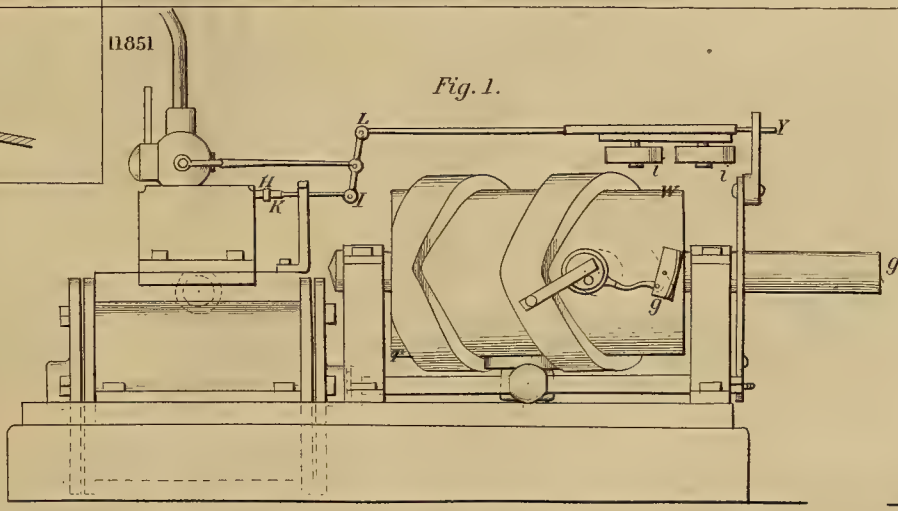

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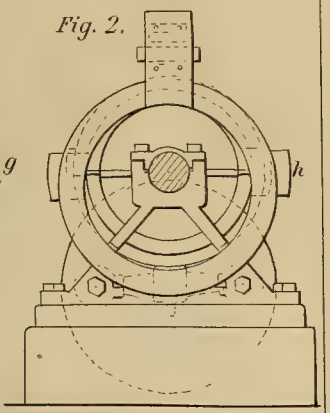

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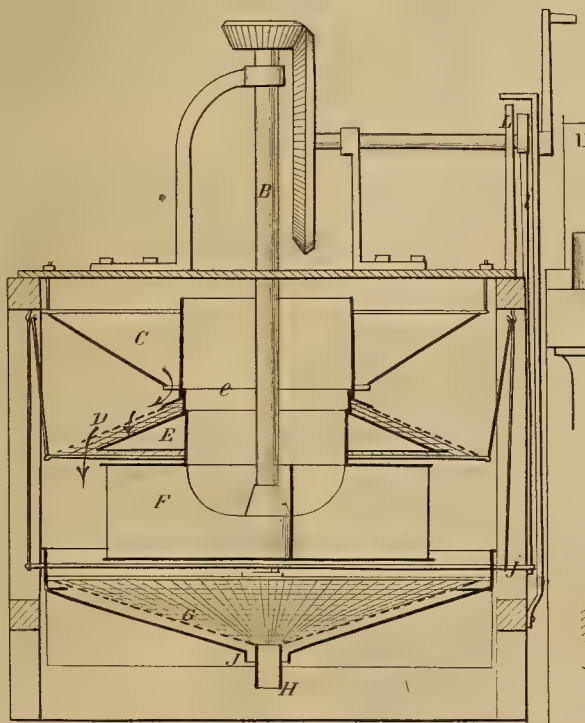

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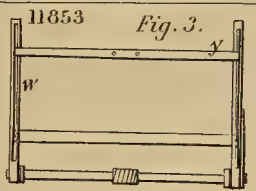

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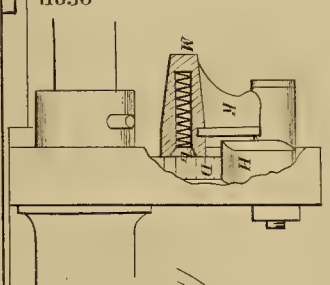

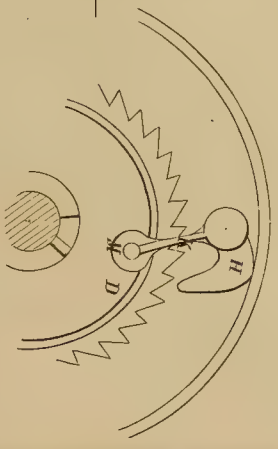

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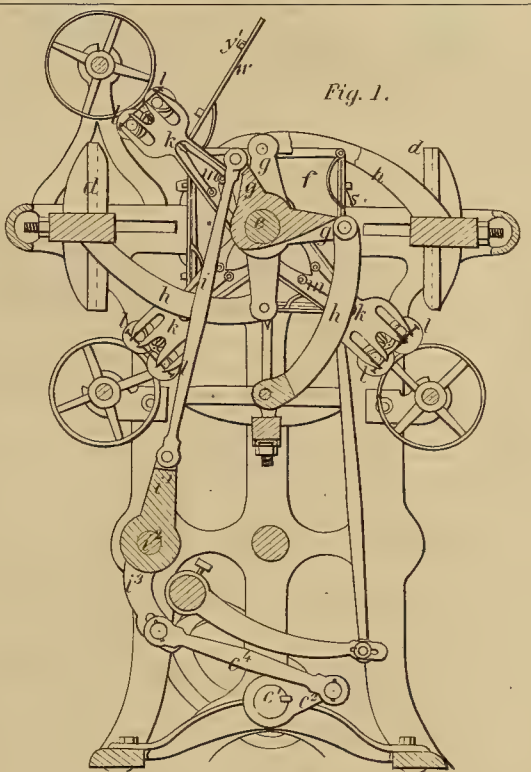

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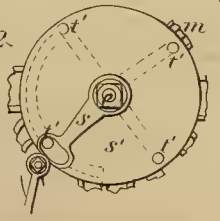

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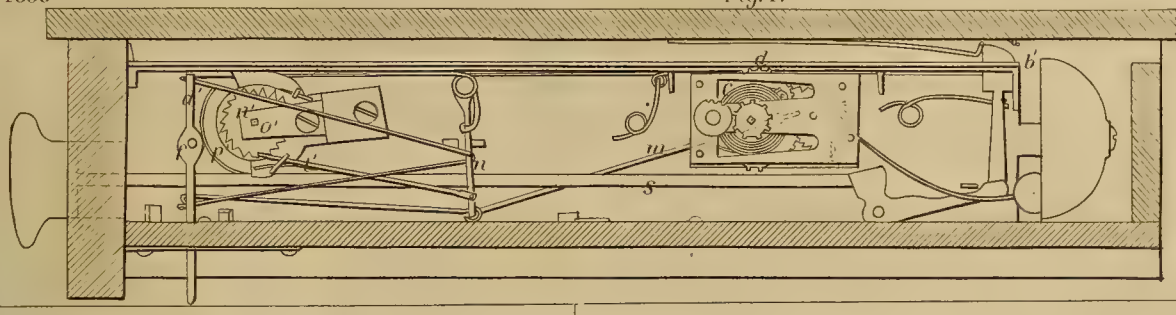

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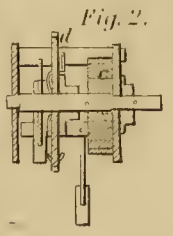

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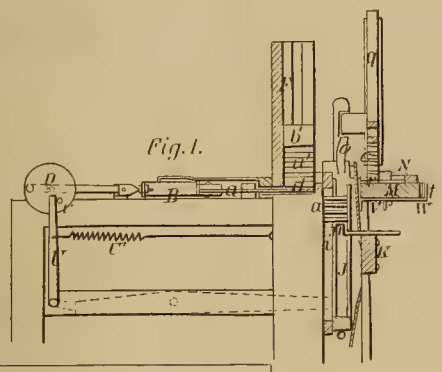

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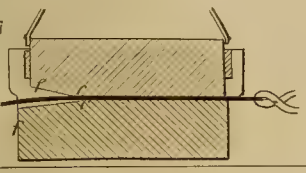

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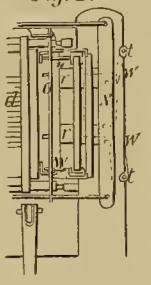

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Fig. 3.

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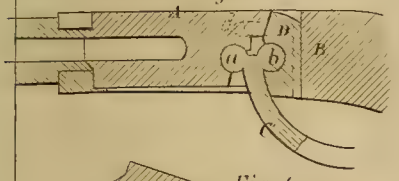

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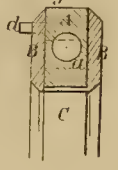

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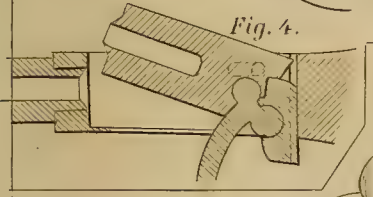

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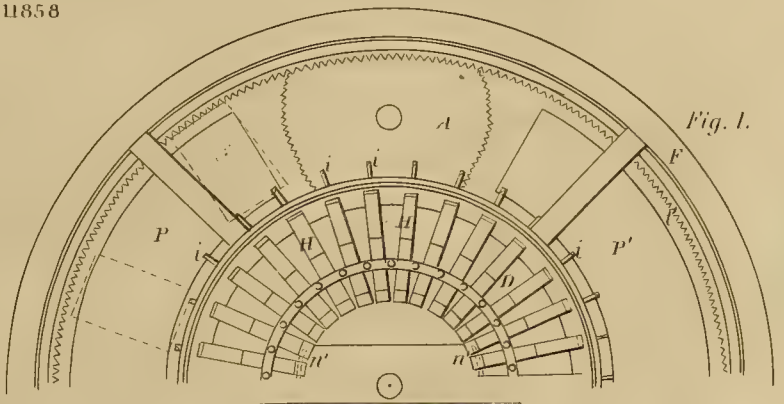

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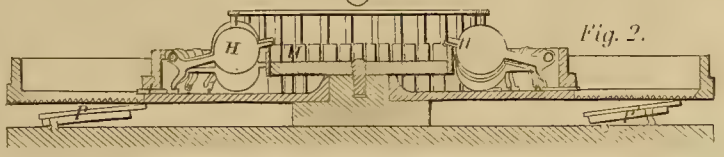

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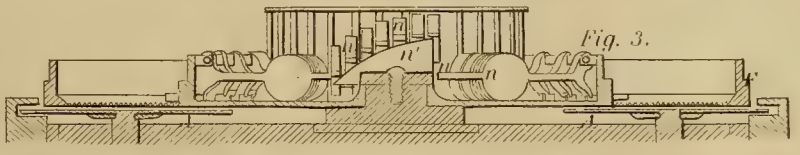

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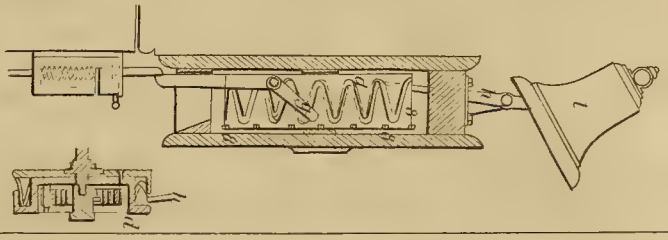

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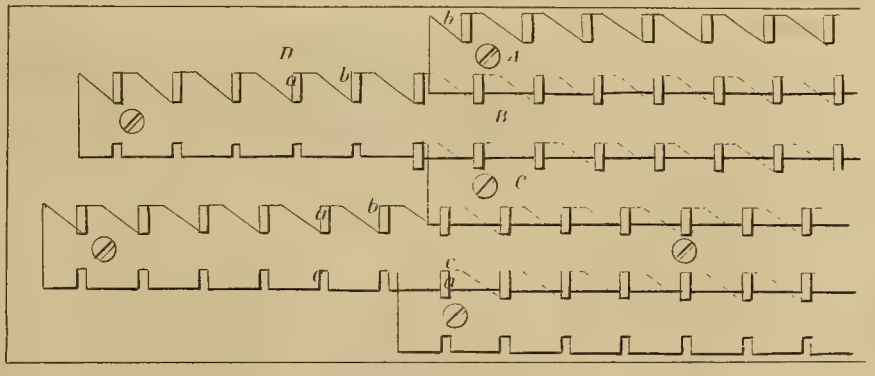

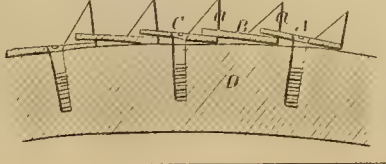

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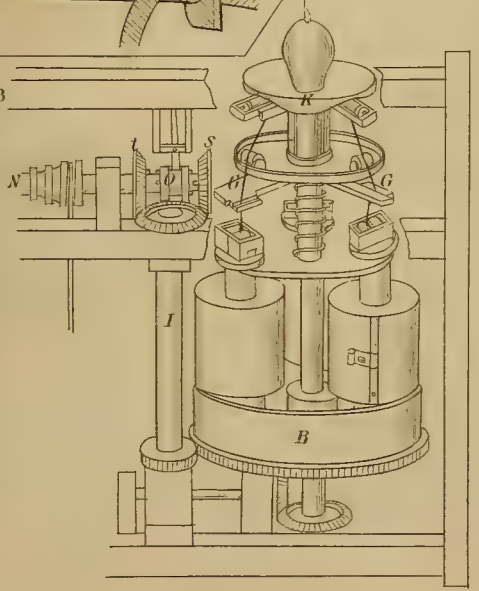

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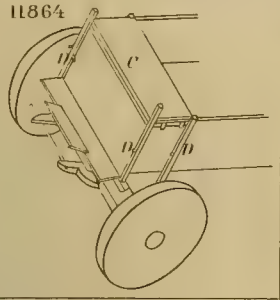

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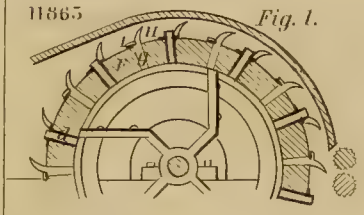

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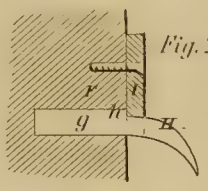

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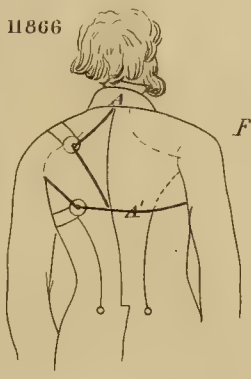

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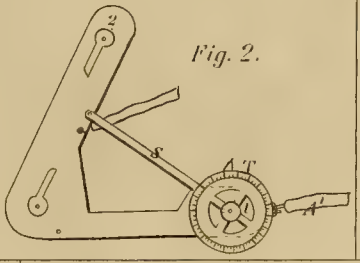

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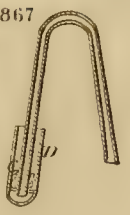

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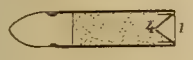

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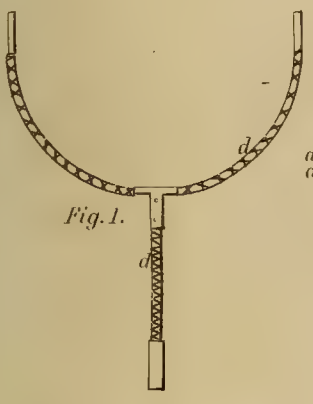

Fig. 1.

Fig. 2.

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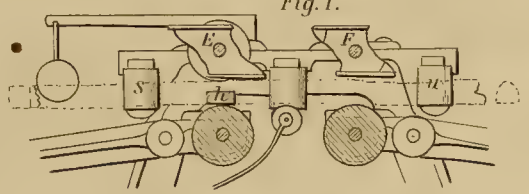
Fig. 1.



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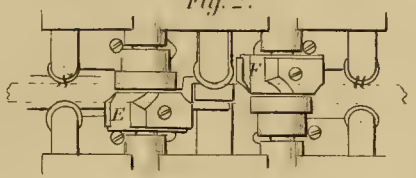

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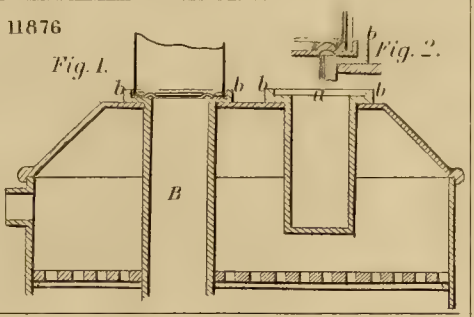

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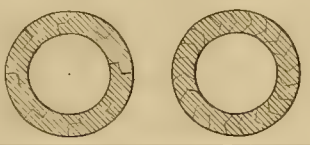

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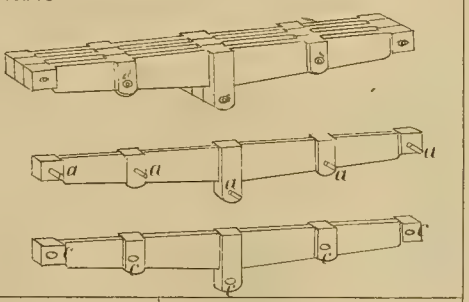

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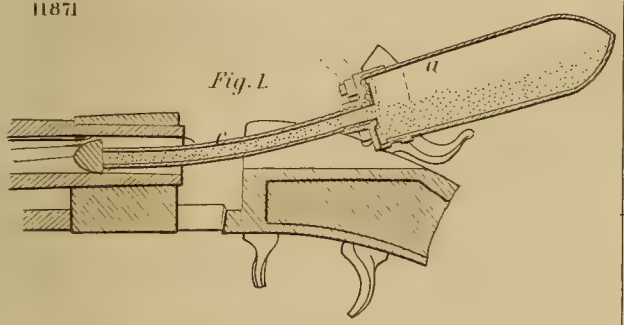

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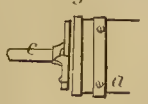

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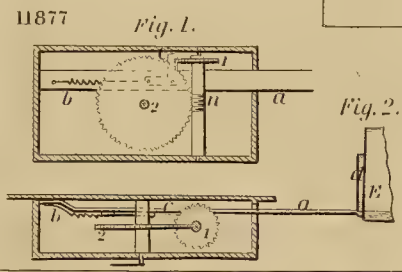

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Fig. 3.

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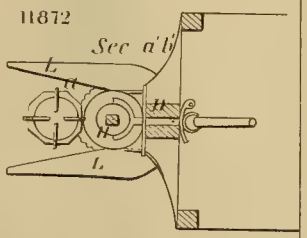

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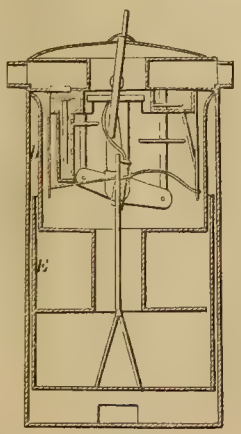

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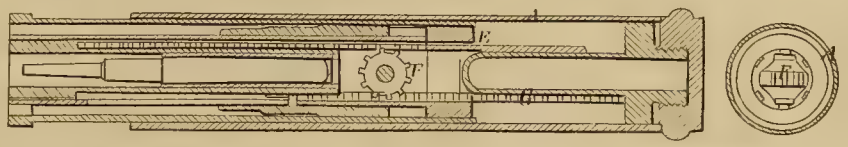

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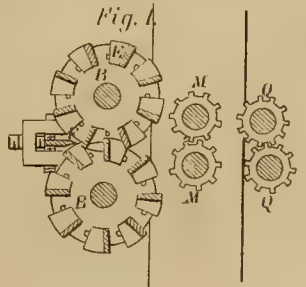

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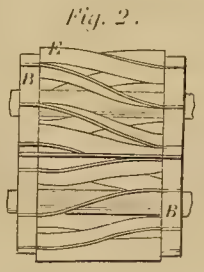

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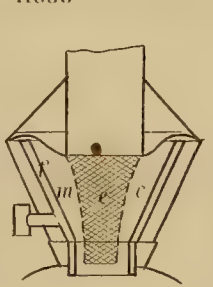

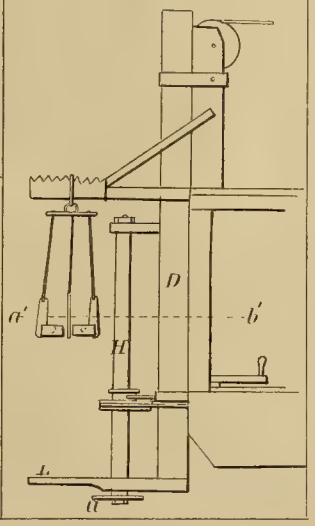

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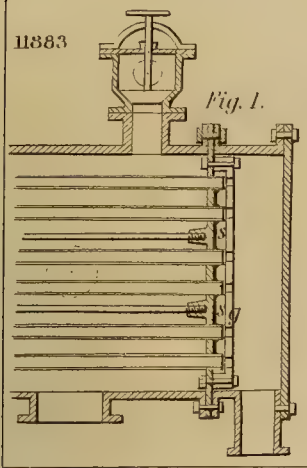

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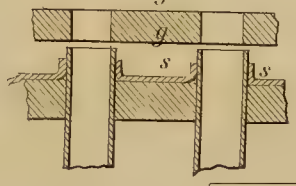
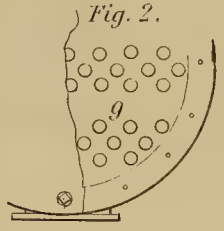


Fig. 2.



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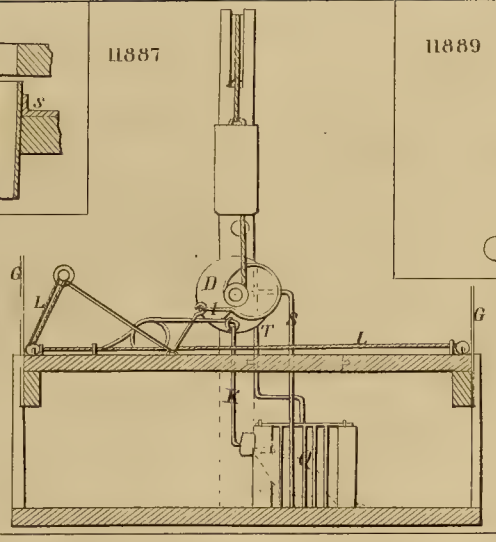

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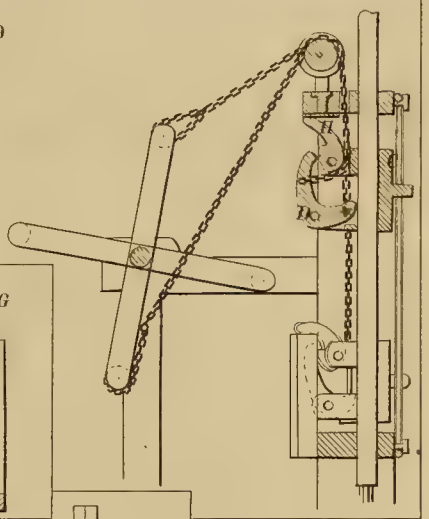

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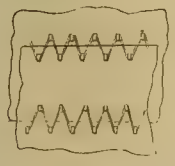

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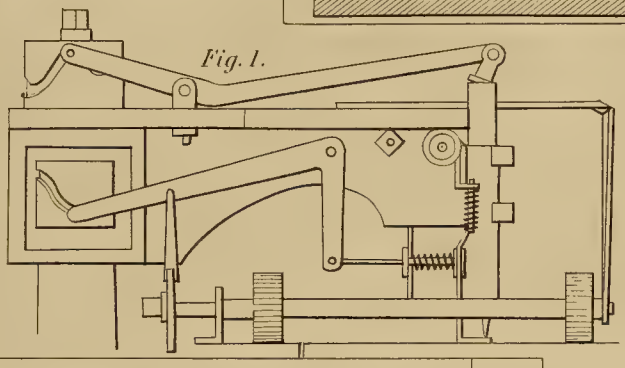

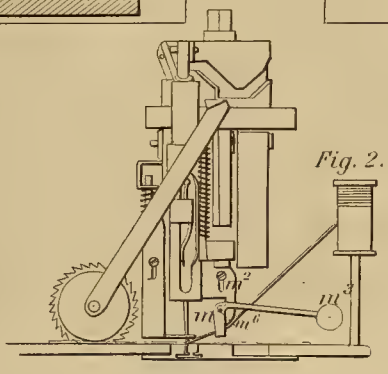

Fig. 2.

Fig. 3.

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Fig. 3.

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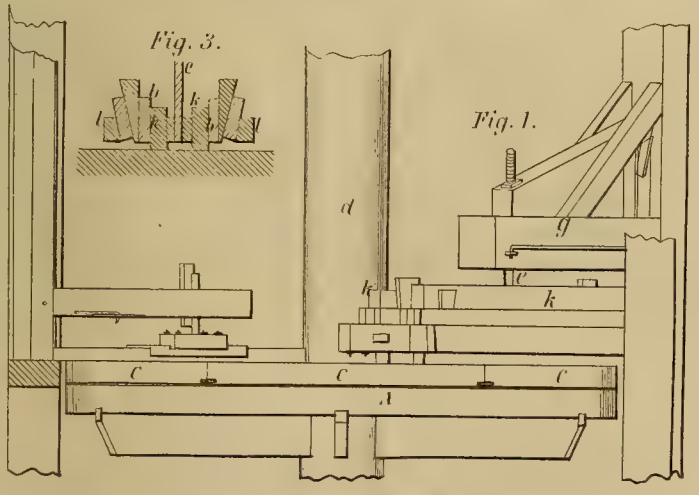

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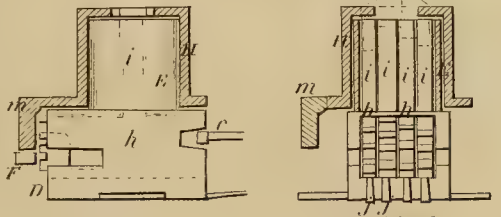

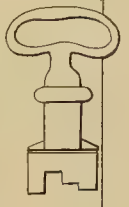

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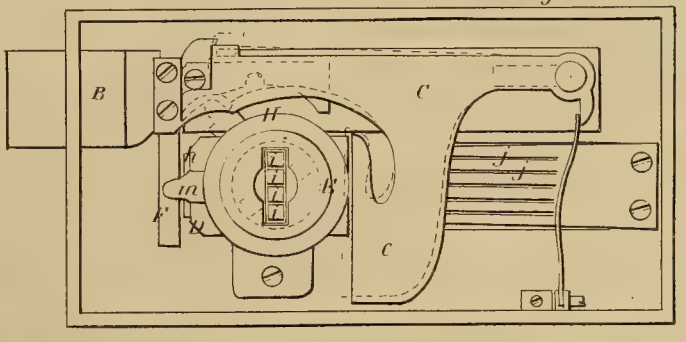

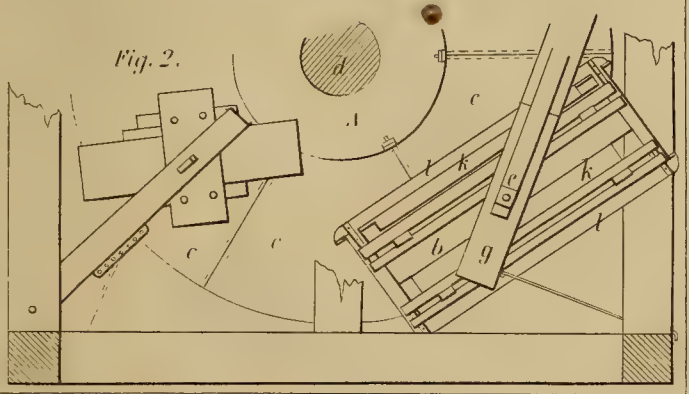

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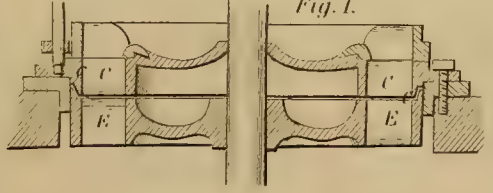

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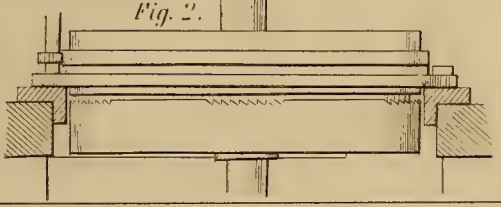

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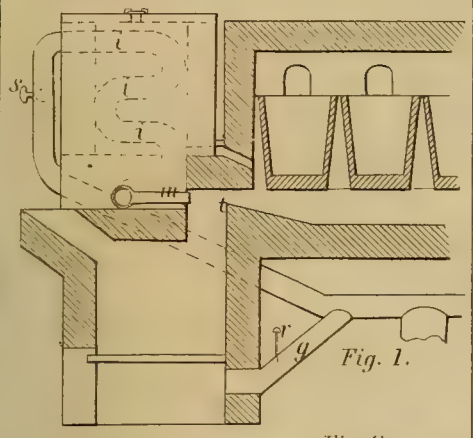

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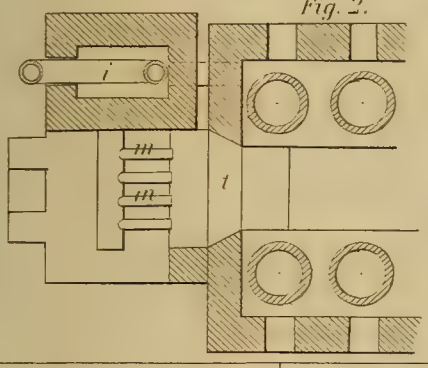

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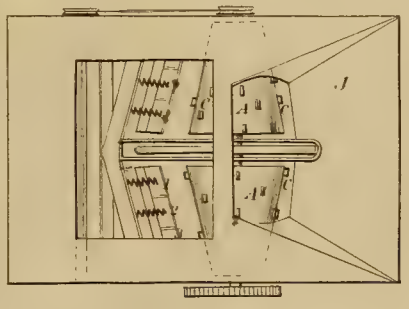

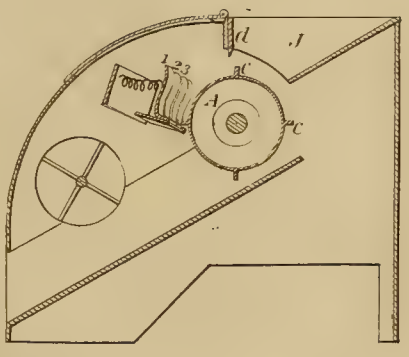

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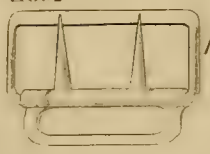

Fig. 1.

Fig. 2.

Fig. 4.

Fig. 3

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Fig. 2.

Fig. 1.

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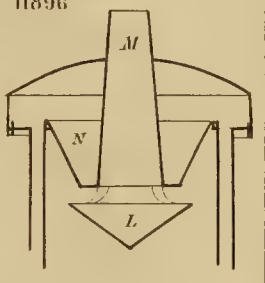

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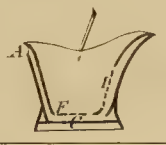

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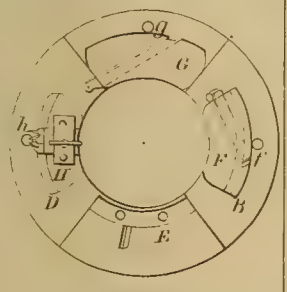

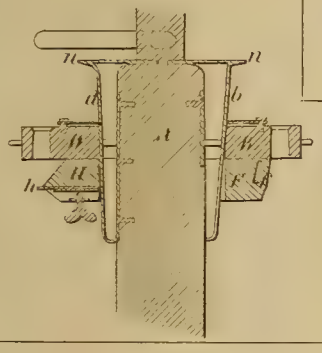

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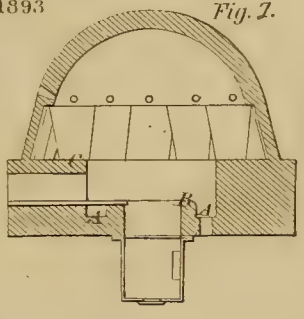

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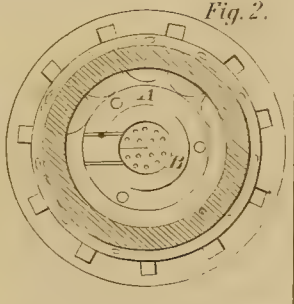

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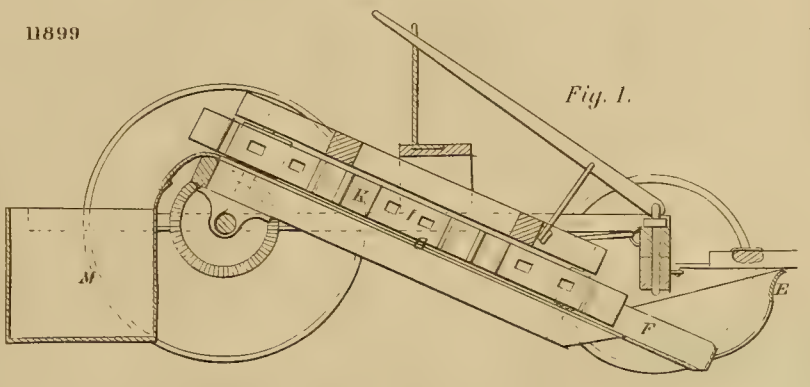

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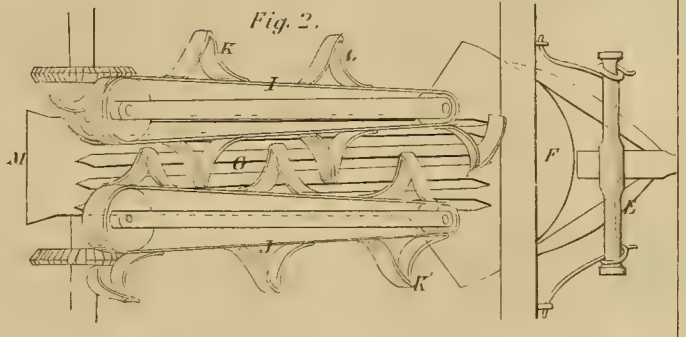

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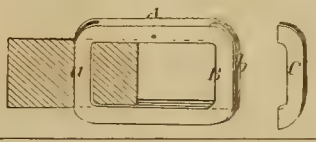

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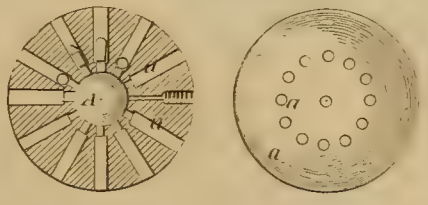

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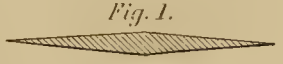

Fig. 1.

Fig. 2.

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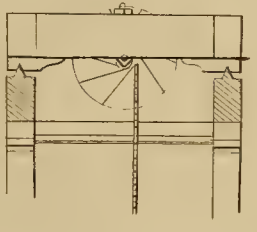

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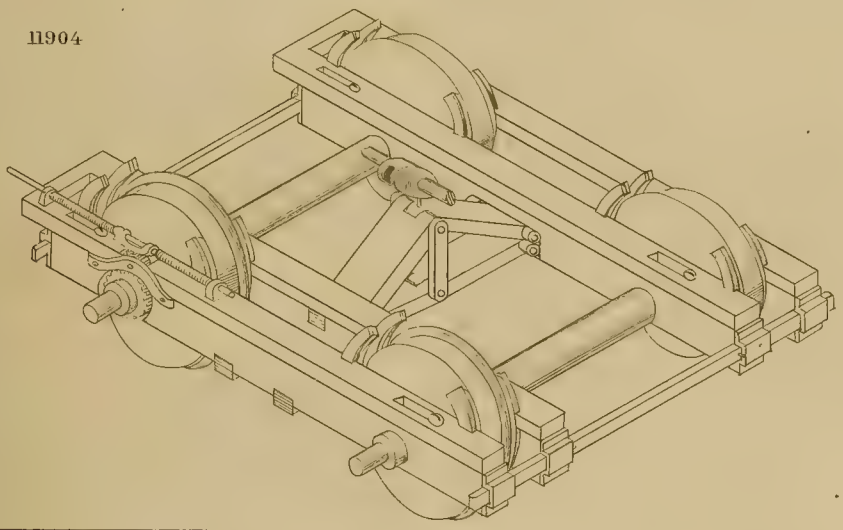

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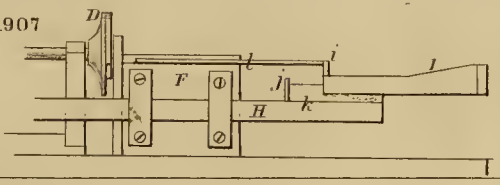

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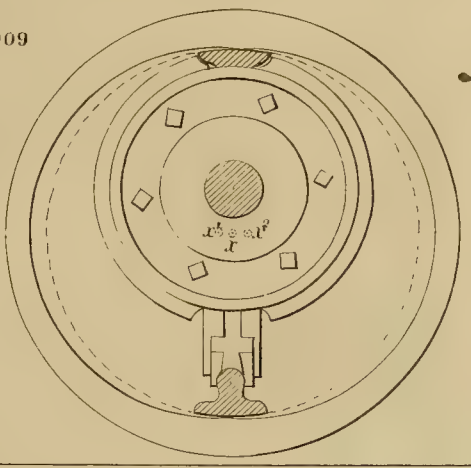

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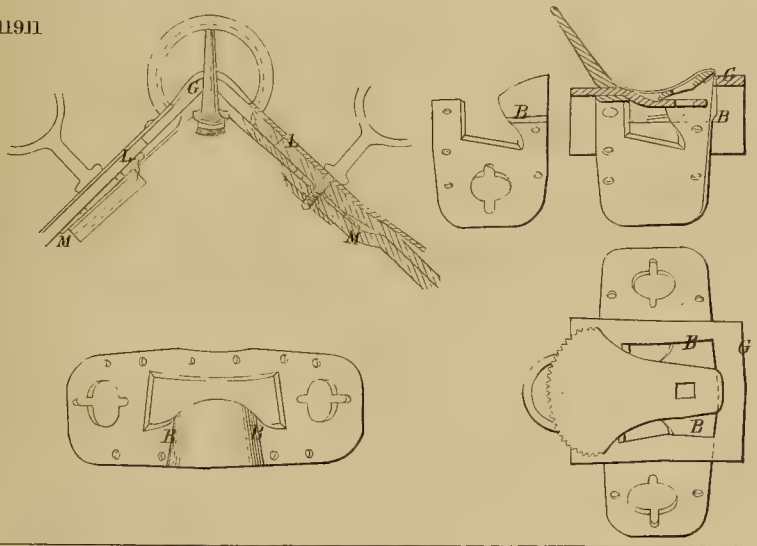

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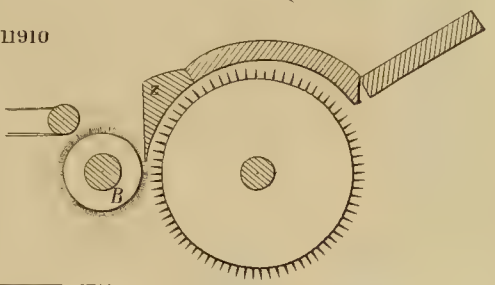

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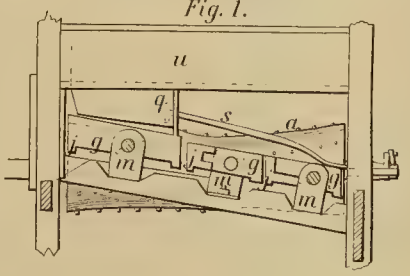

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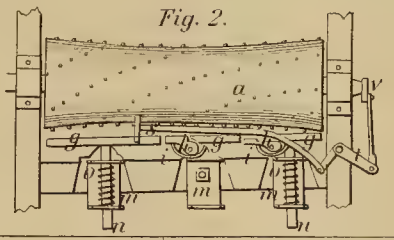

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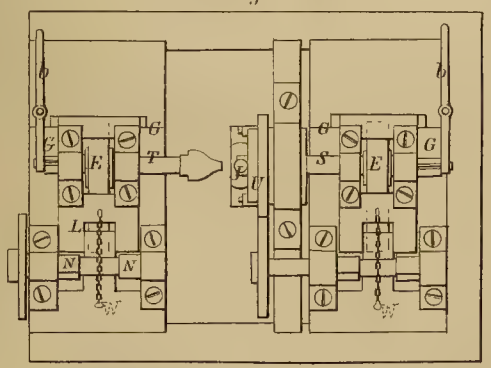

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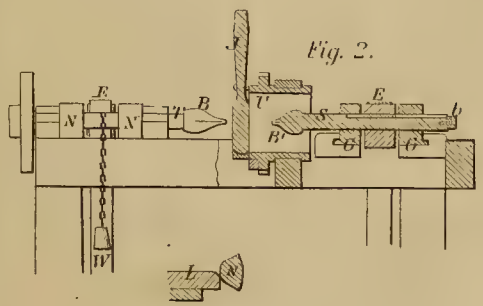

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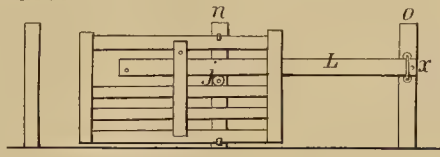

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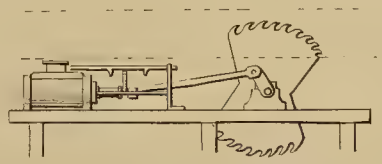

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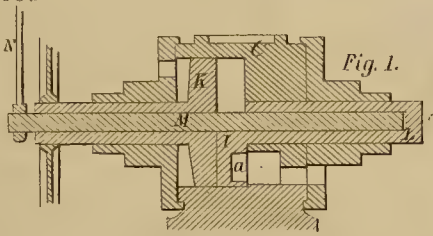

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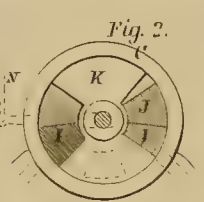

Fig. 3.

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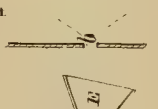

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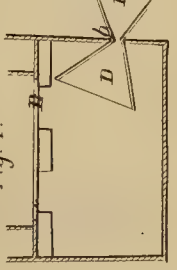

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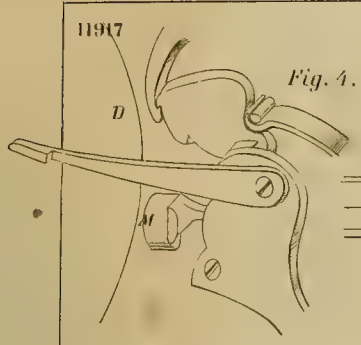

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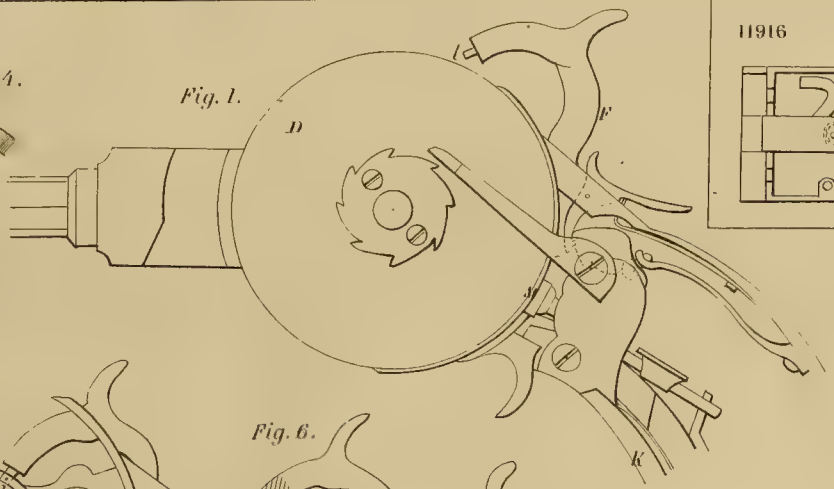

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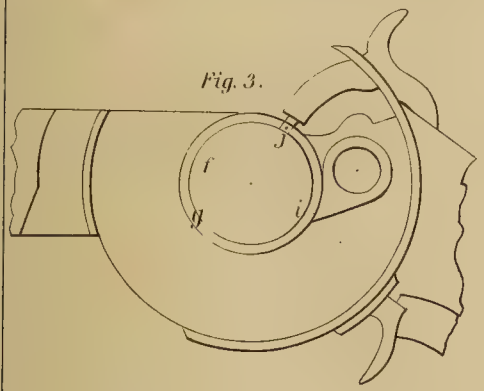

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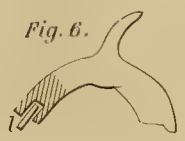

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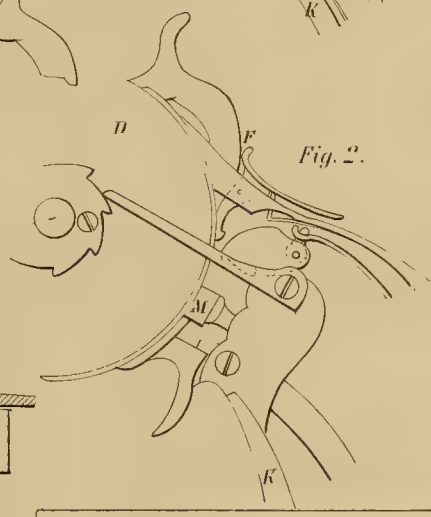

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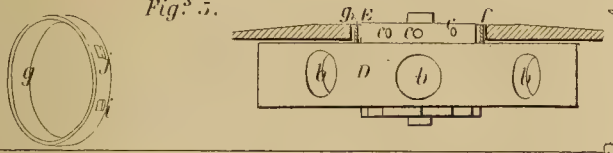

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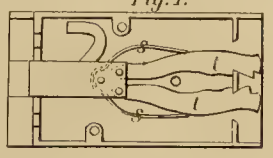

Fig. 2.

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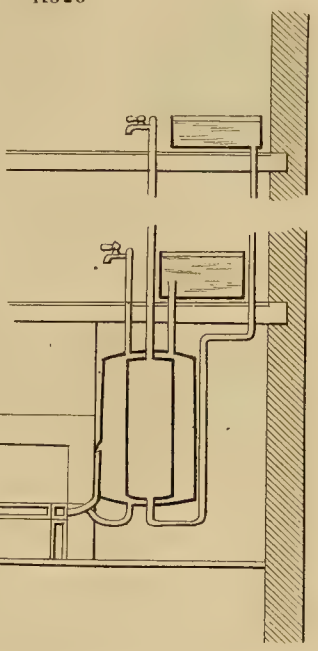

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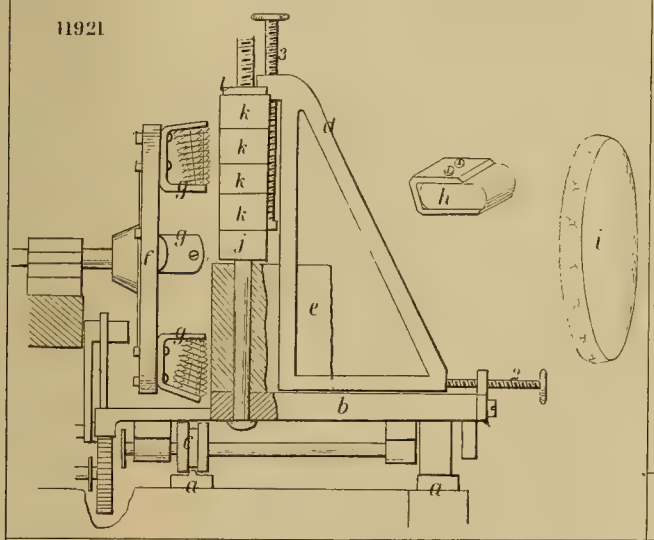

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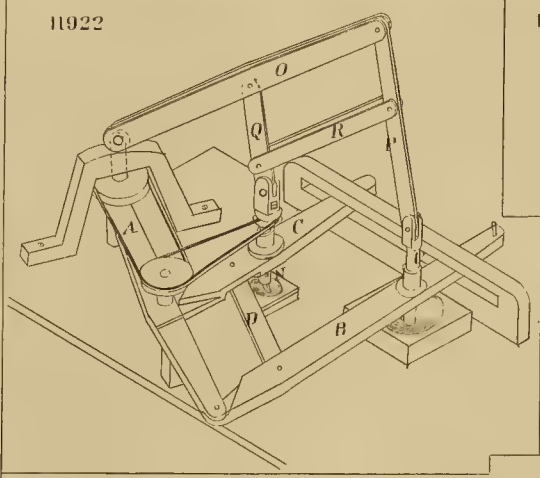

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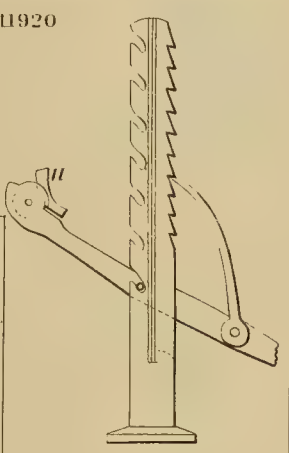

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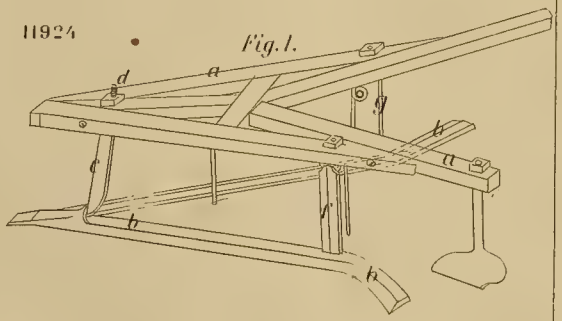

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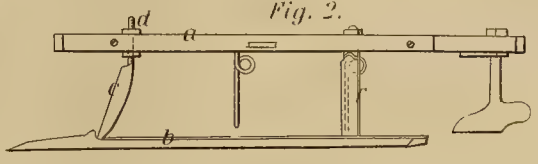

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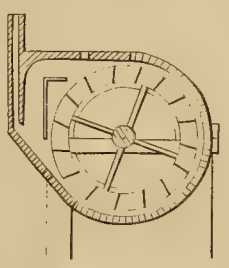

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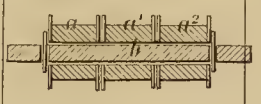

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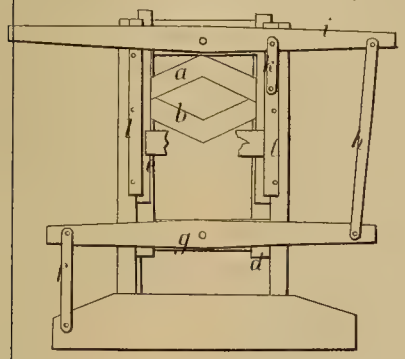

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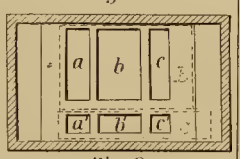

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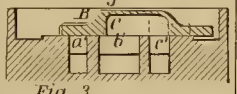

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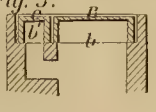

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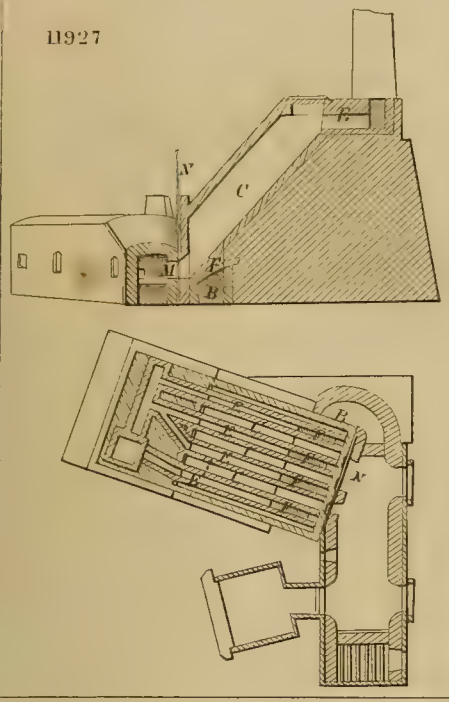

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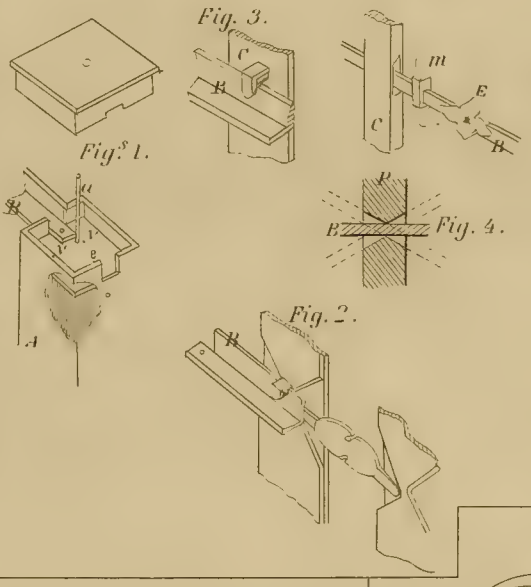

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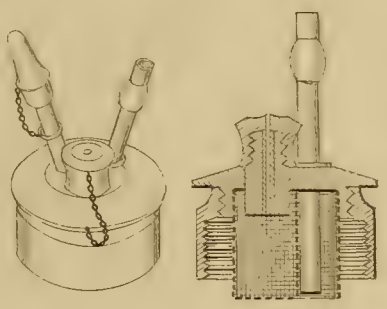

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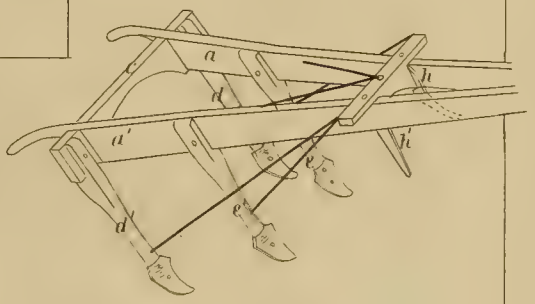

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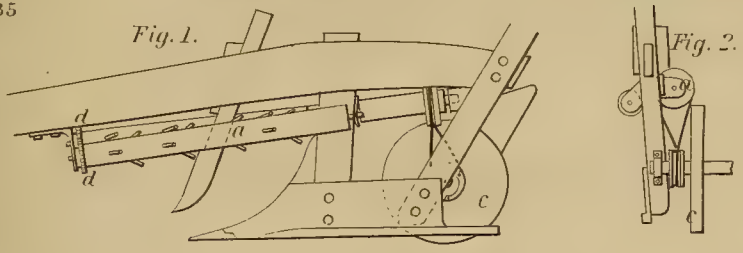

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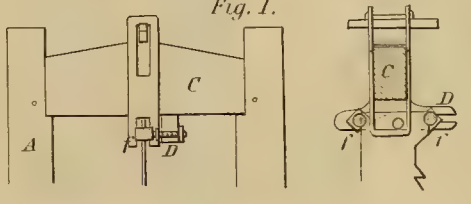

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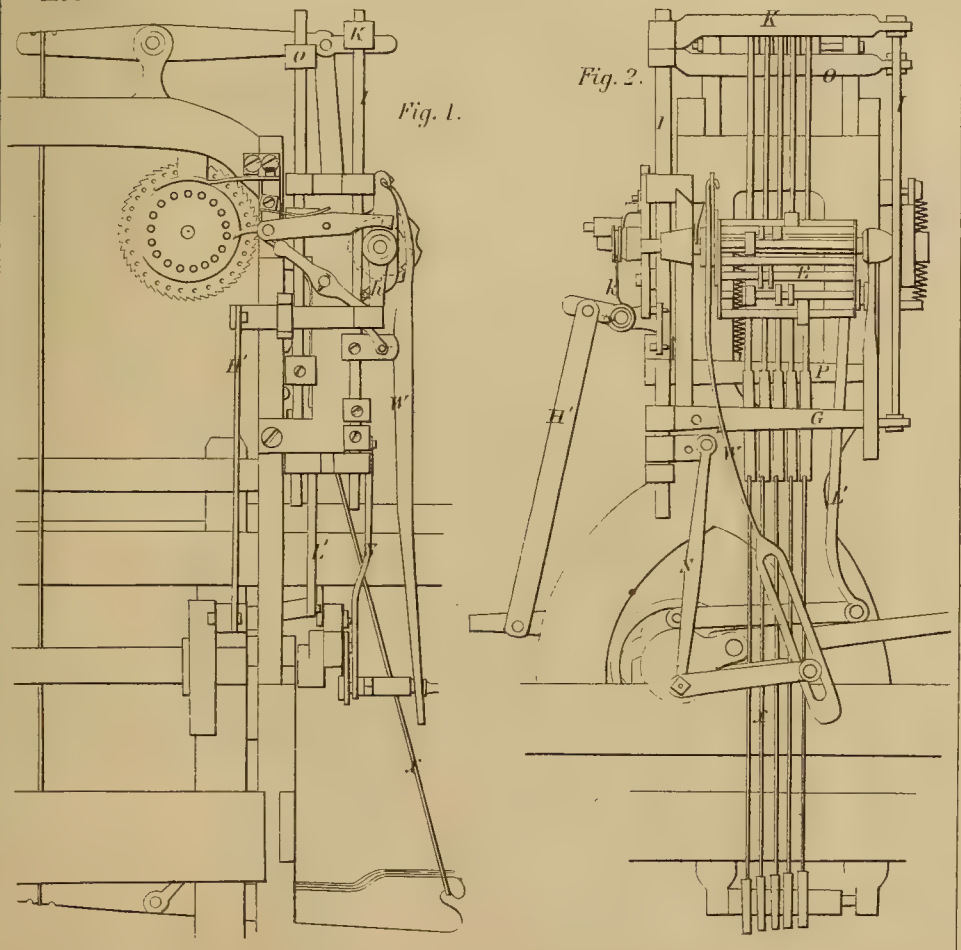

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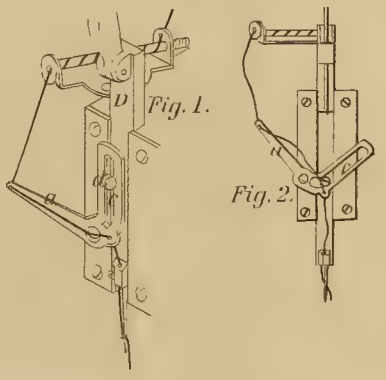

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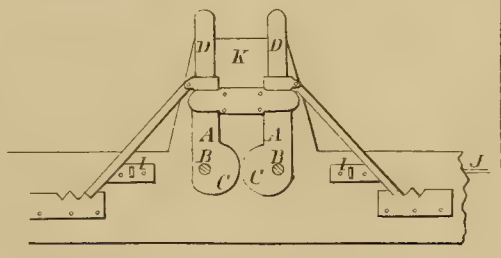

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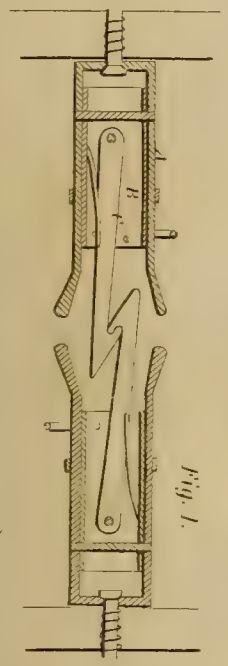

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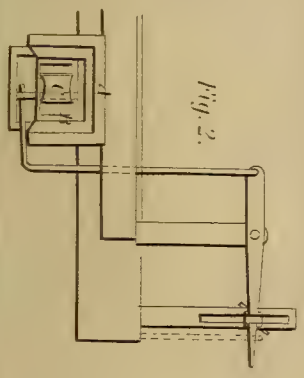

Fig. 2.

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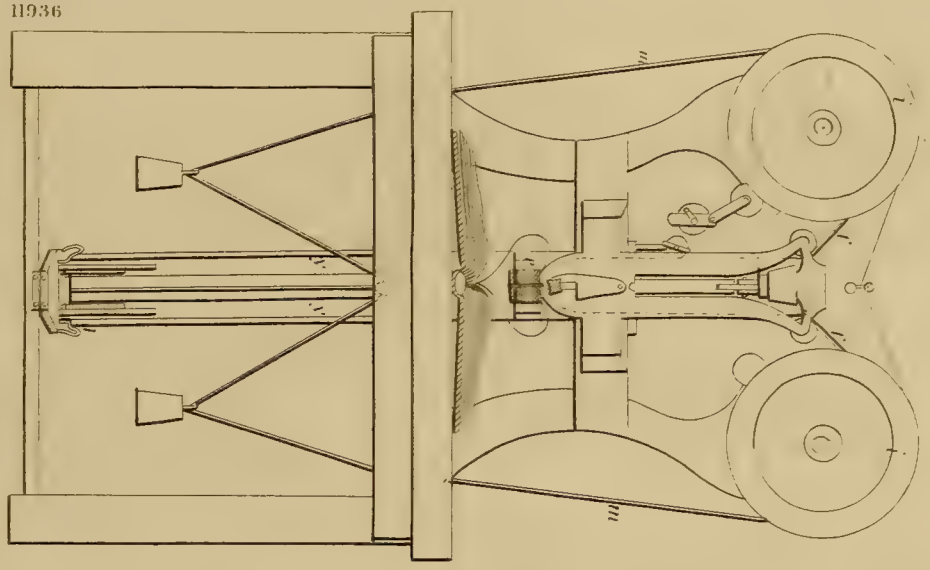

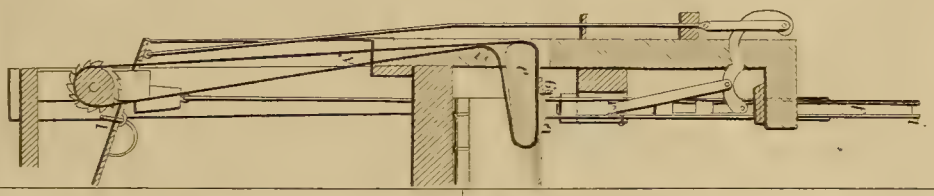

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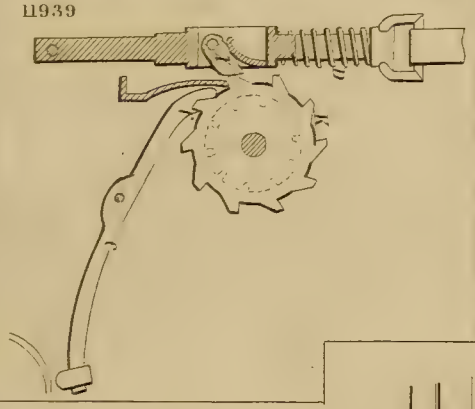

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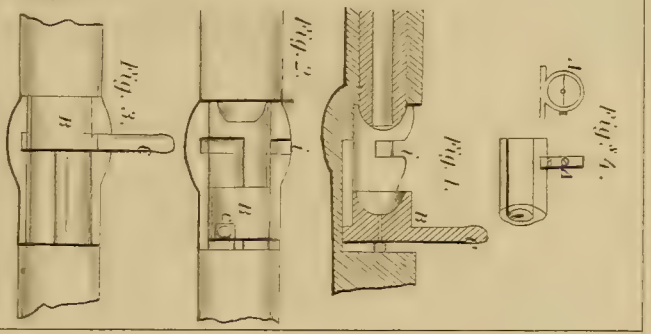

Fig. 3. Fig. 2. Fig. 1. Fig. 4.

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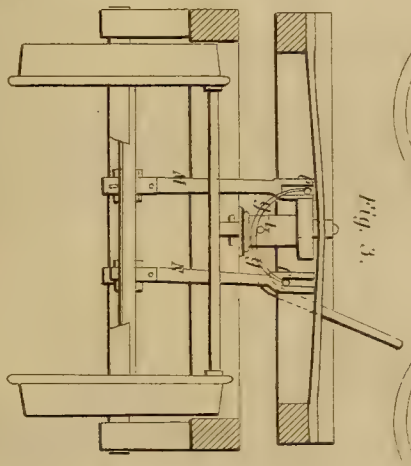

Fig. 3.

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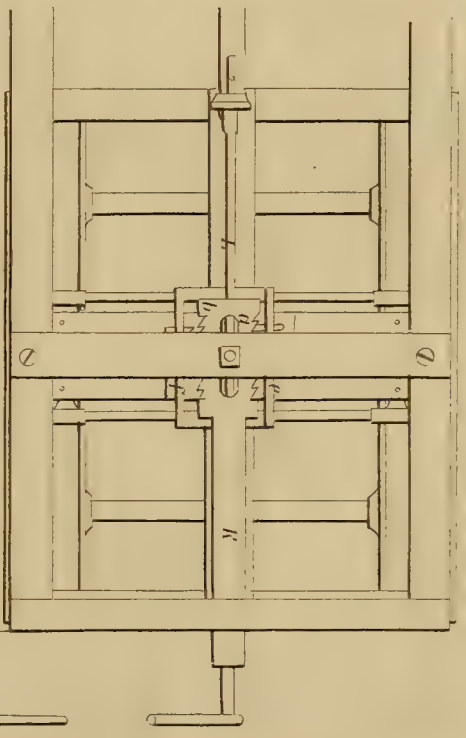

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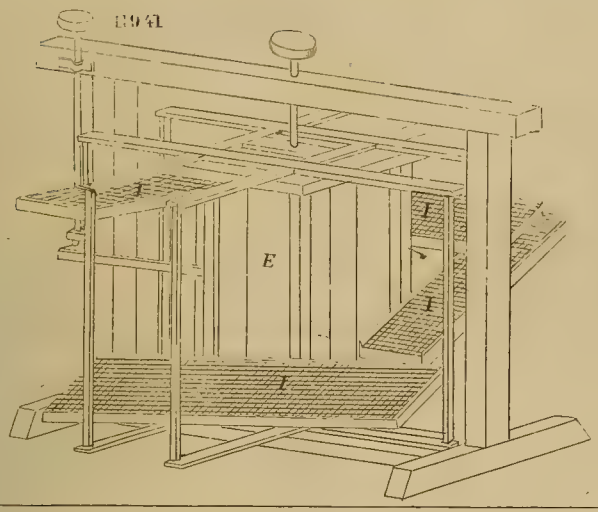

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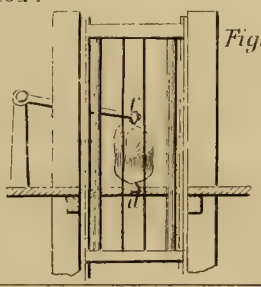

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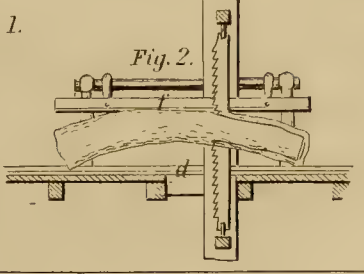

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Fig. 1.

Figs 2.

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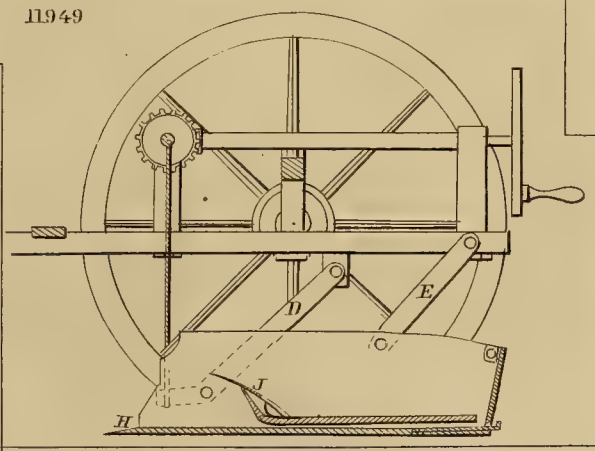

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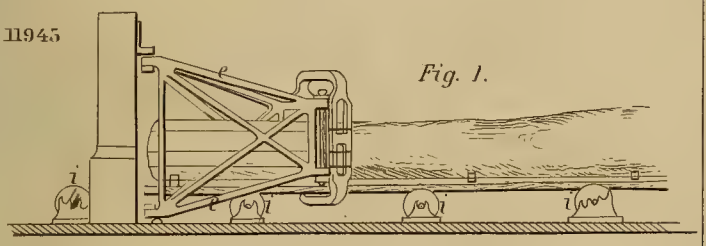

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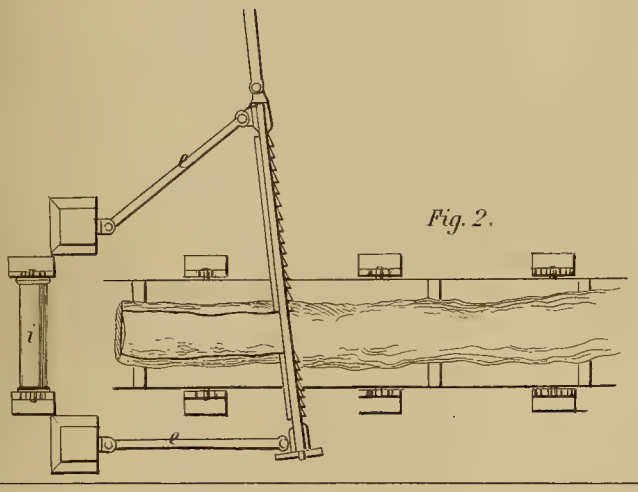

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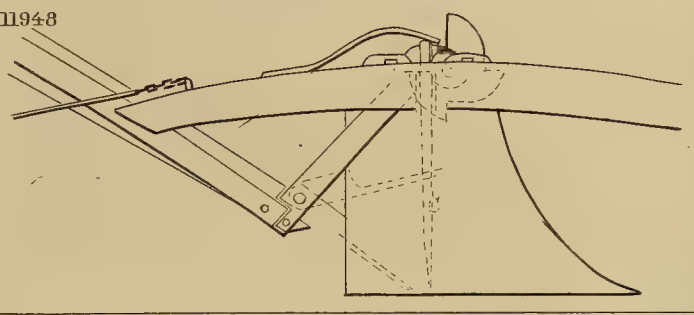

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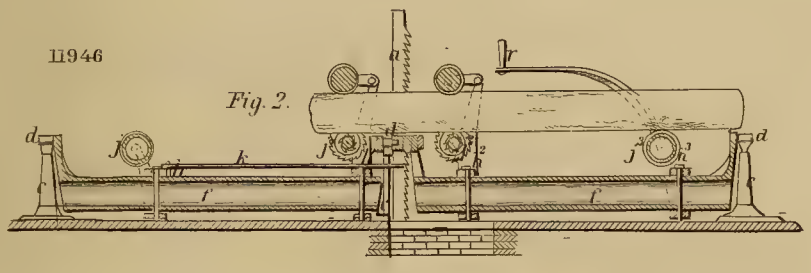

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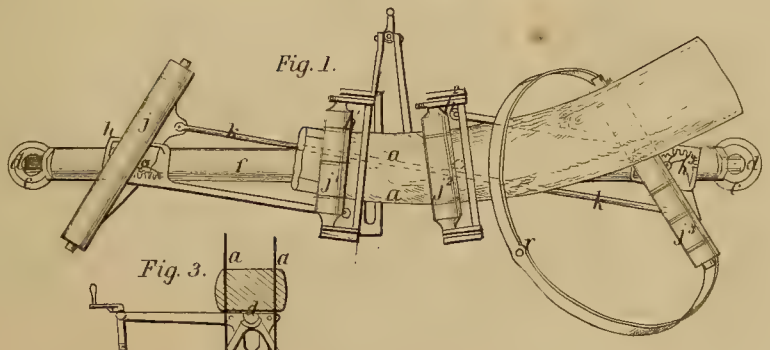

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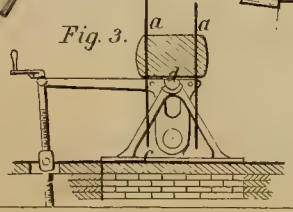

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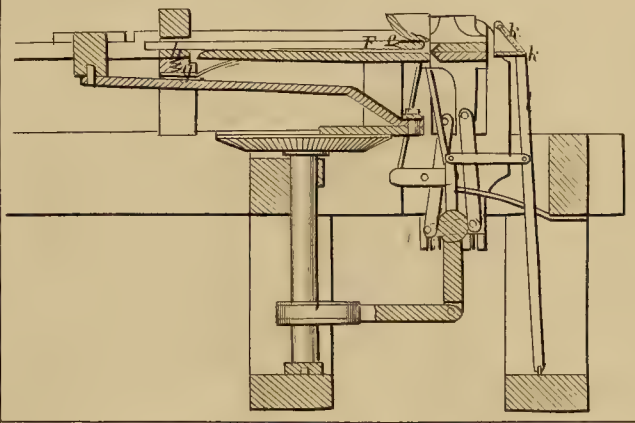

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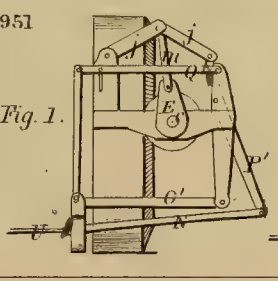

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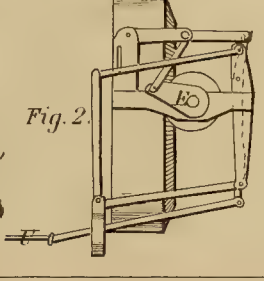

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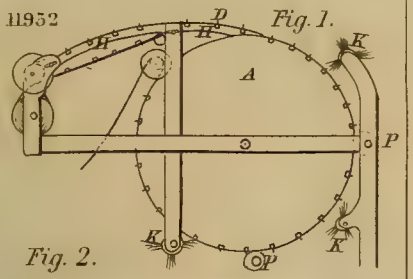

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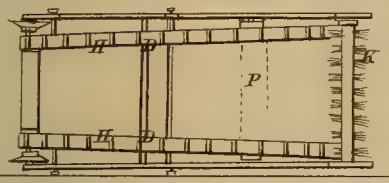

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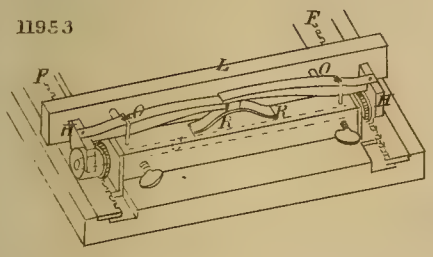

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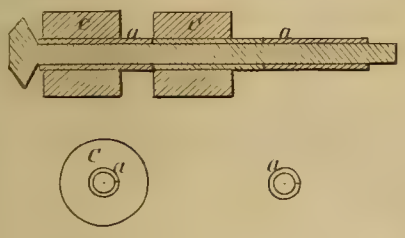

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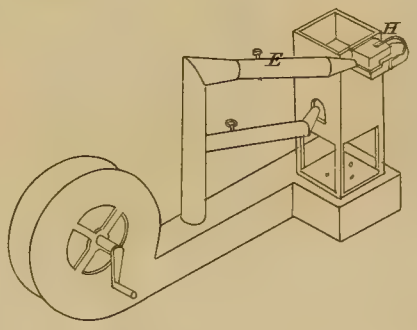

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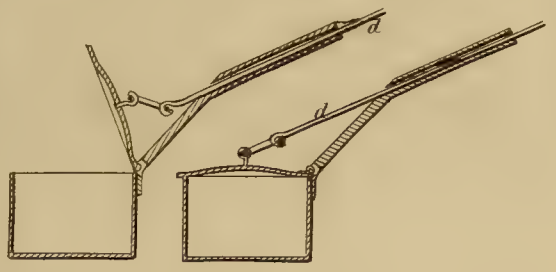

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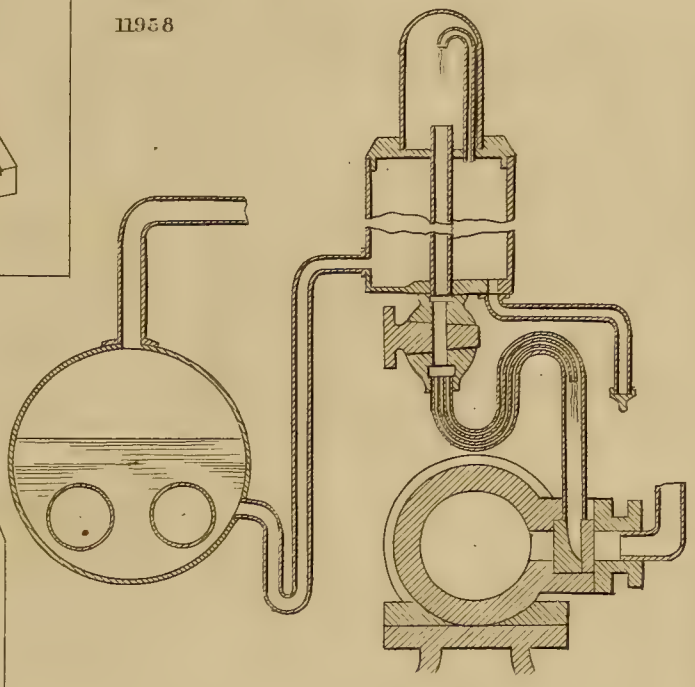

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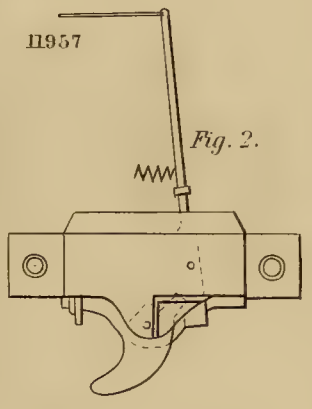

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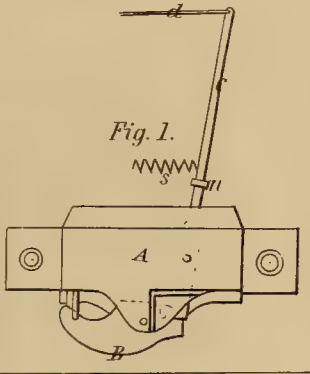

Fig. 1.

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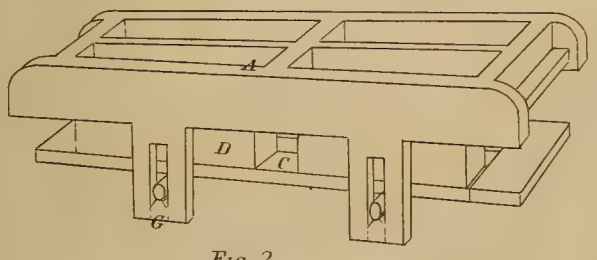

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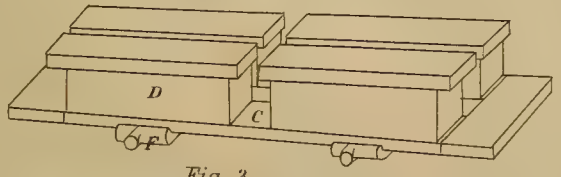

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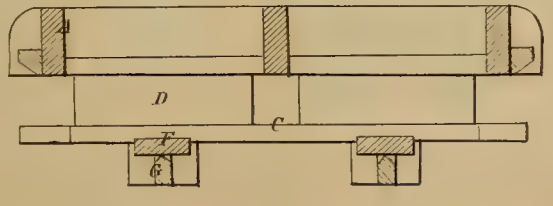

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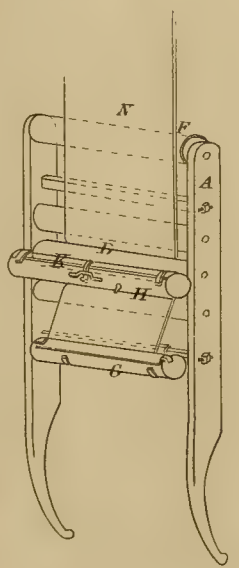

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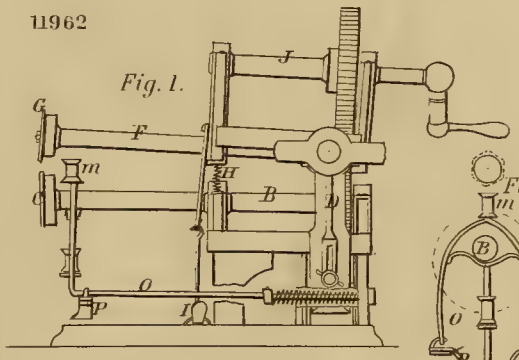

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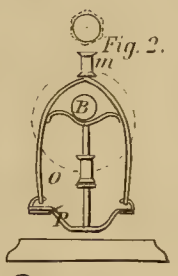
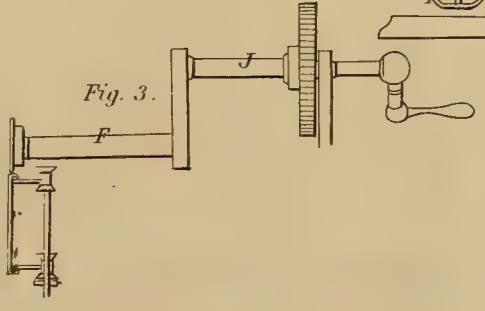


Fig. 3.



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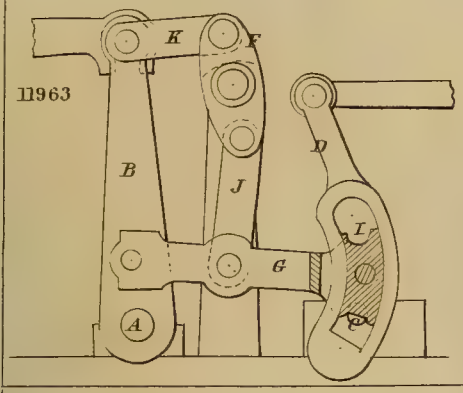

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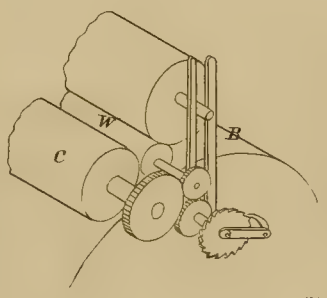

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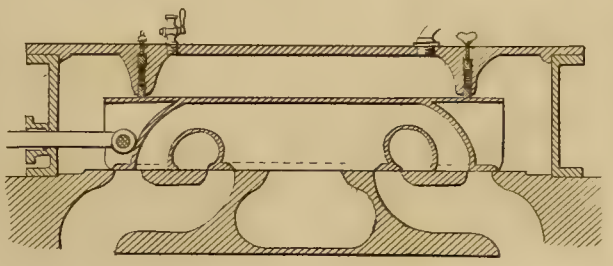

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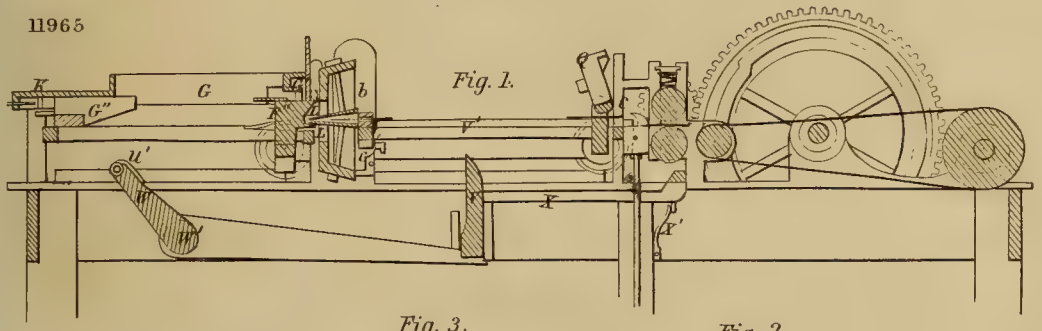

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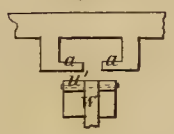

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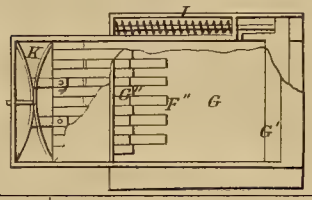

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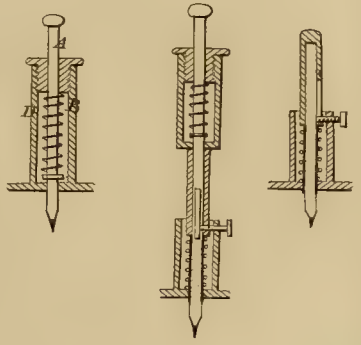

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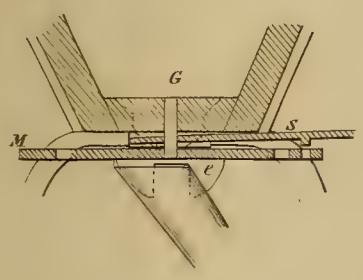

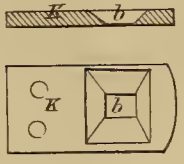

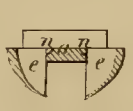

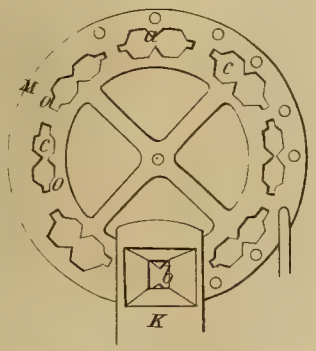

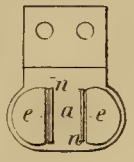

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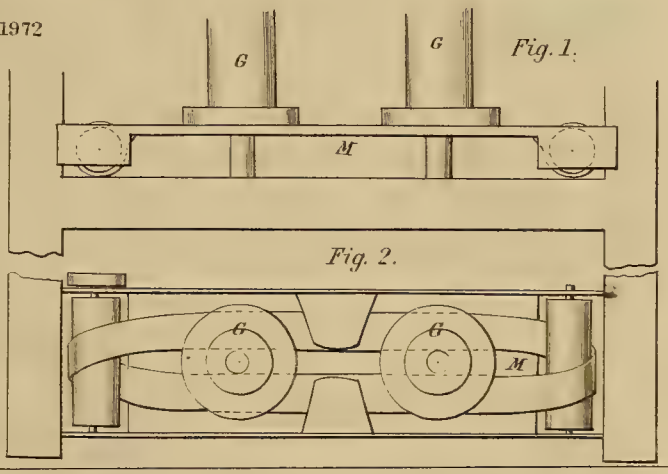

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Fig. 2.

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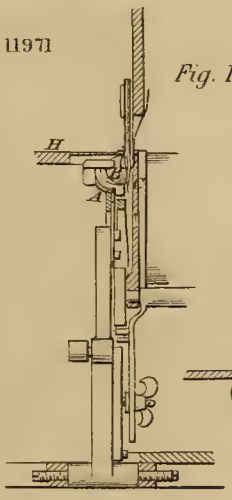

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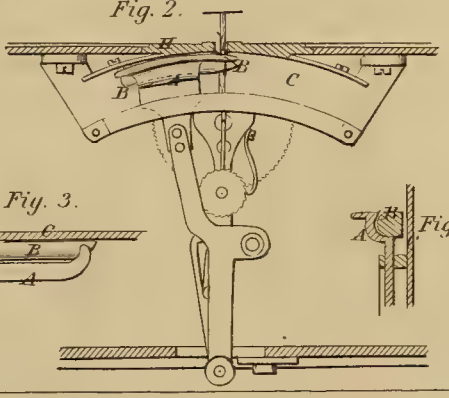

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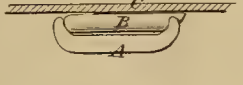

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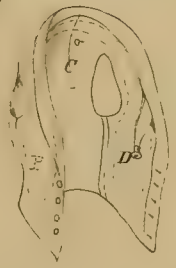

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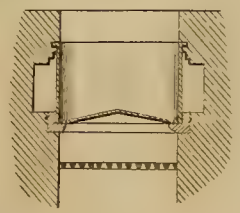

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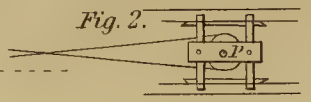

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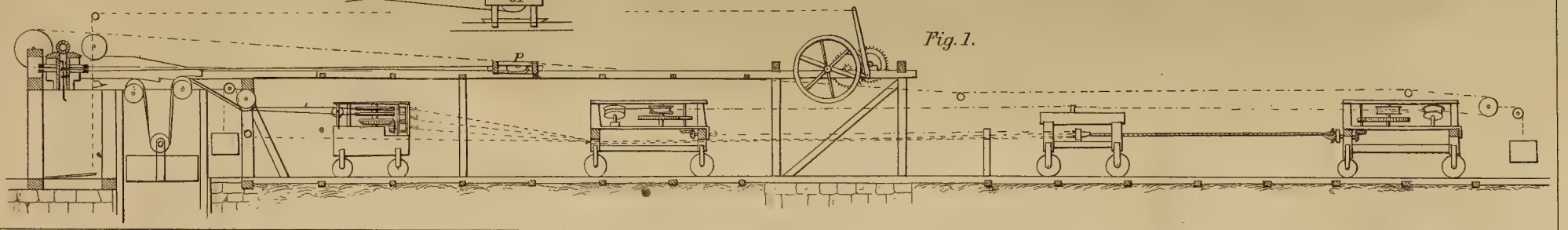

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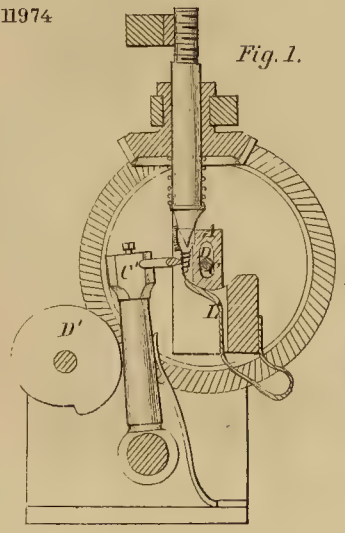

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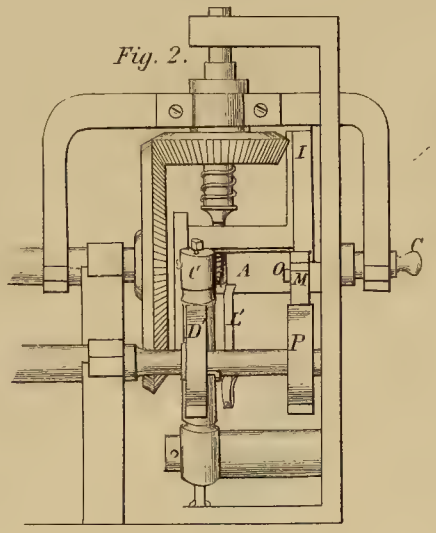

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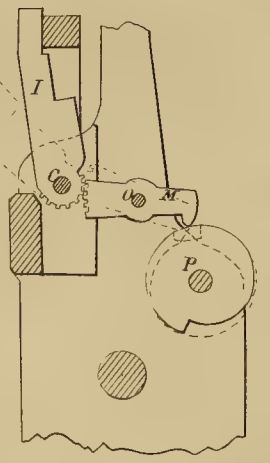

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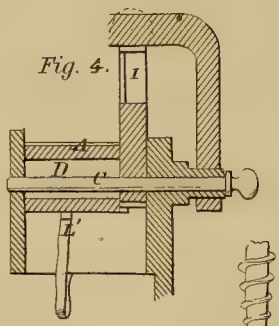

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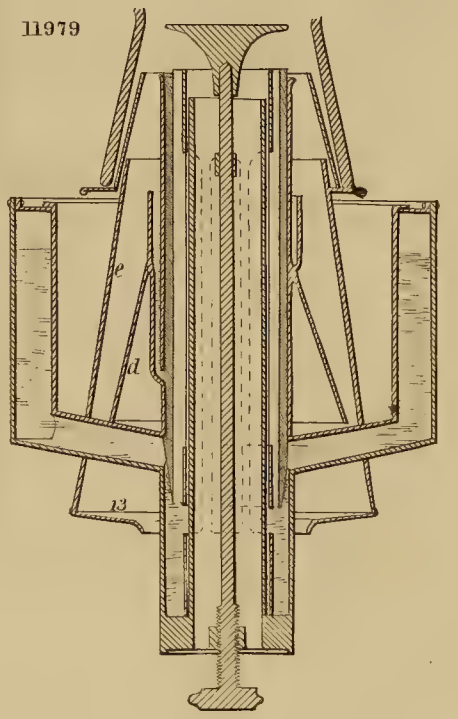

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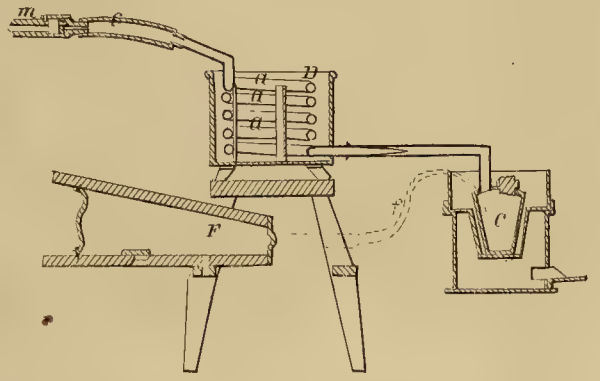

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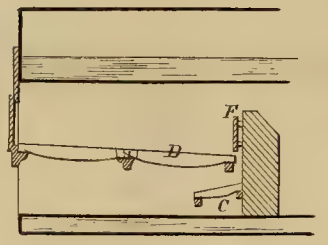

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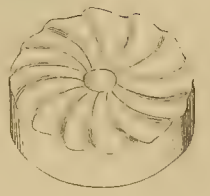

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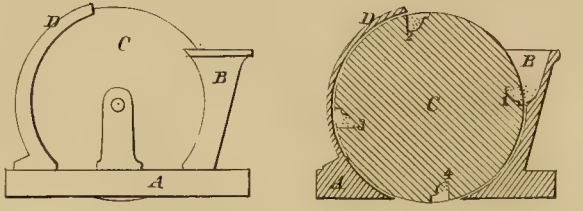

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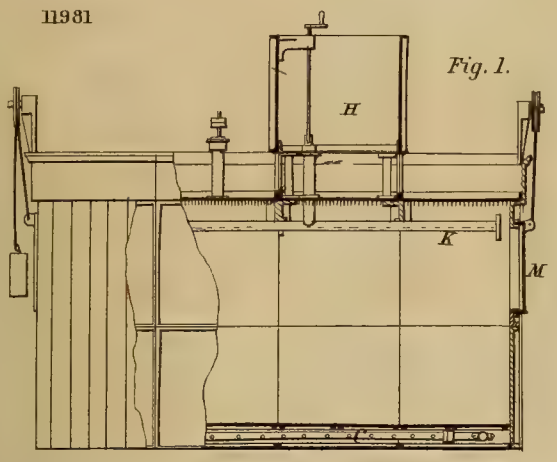

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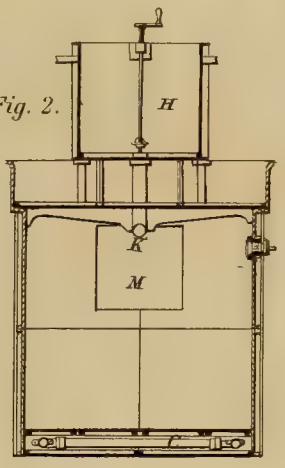

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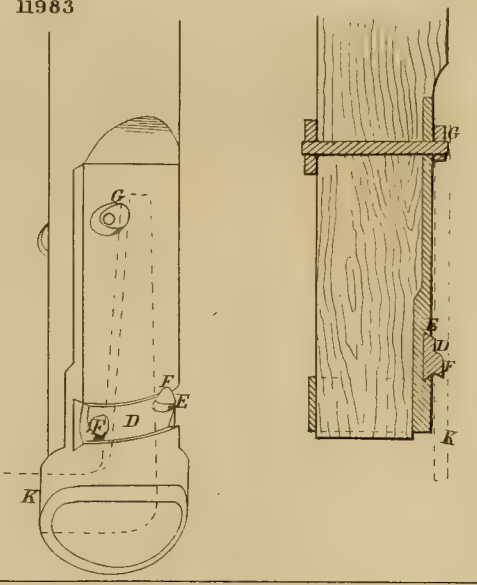

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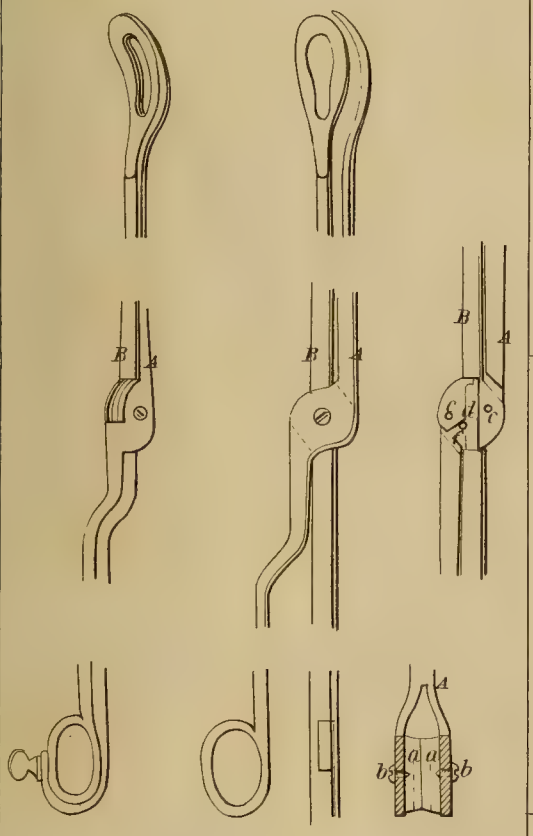

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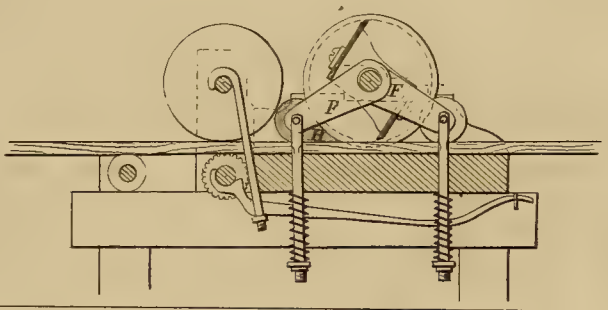

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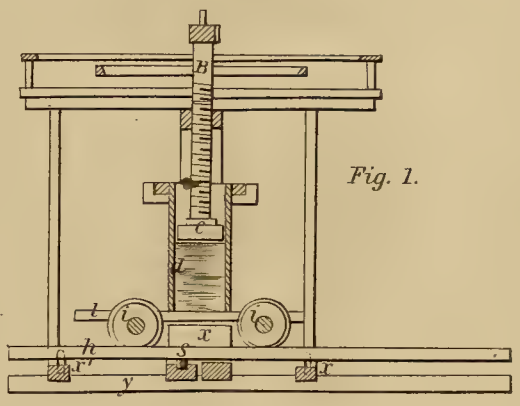

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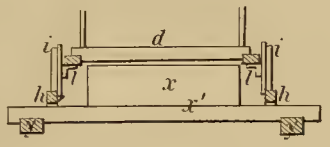

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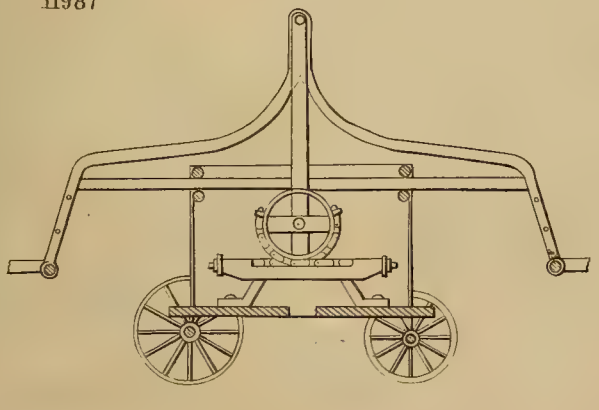

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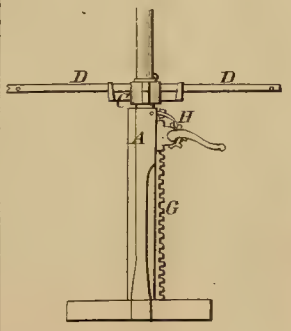

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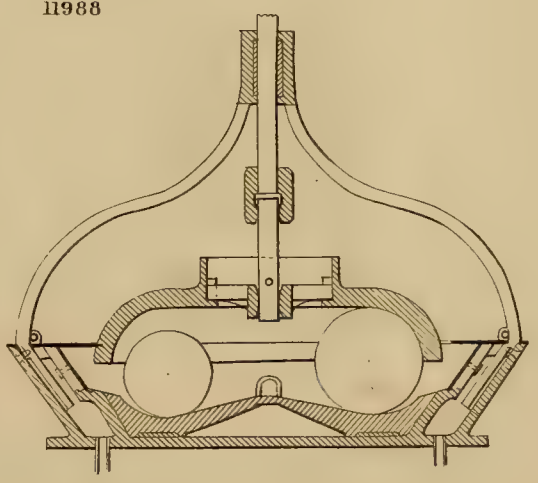

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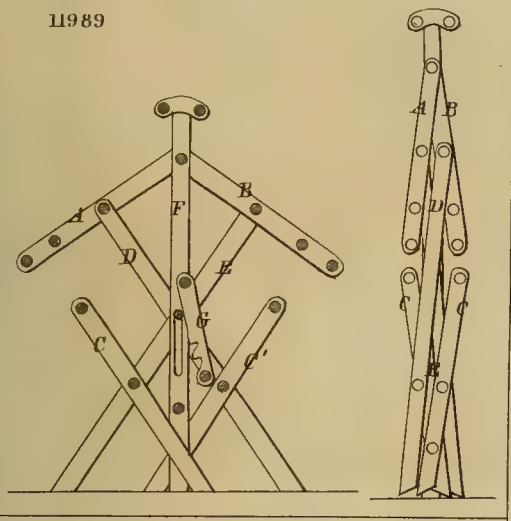

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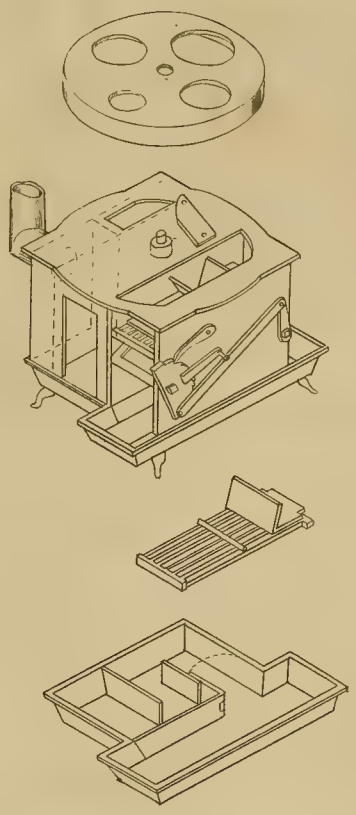

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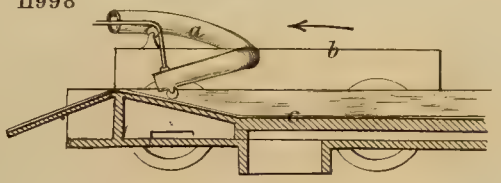

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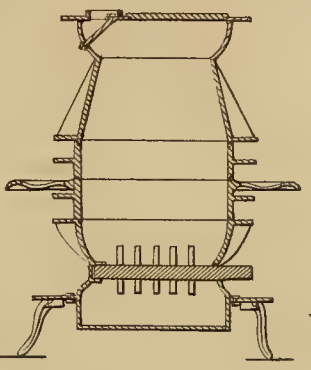

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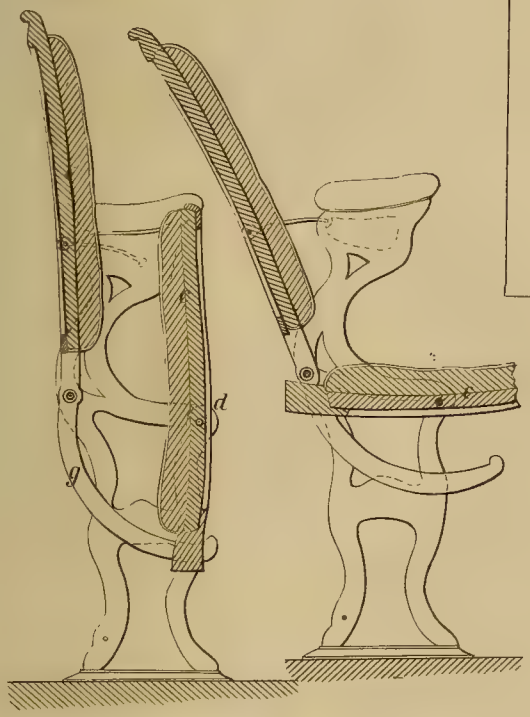

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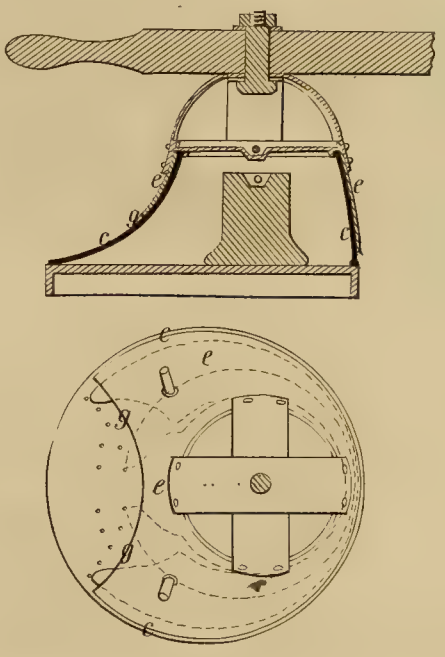

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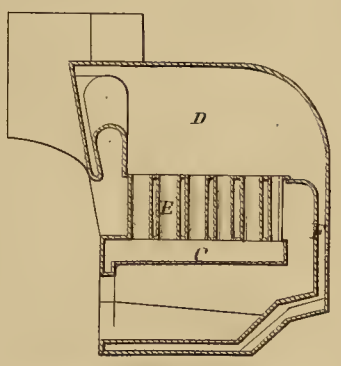

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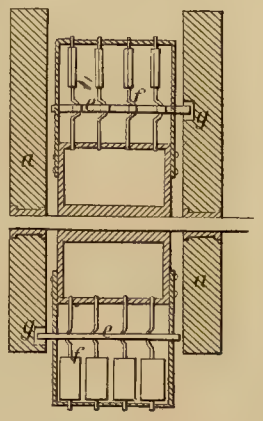

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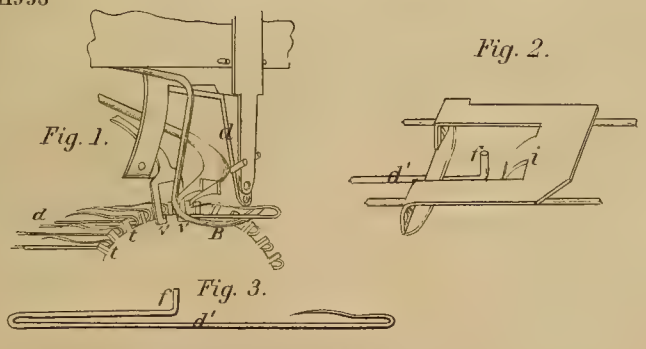

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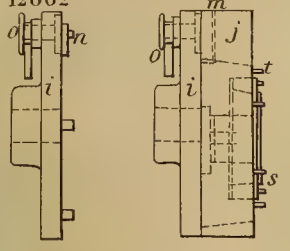

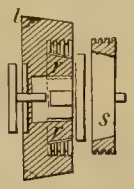

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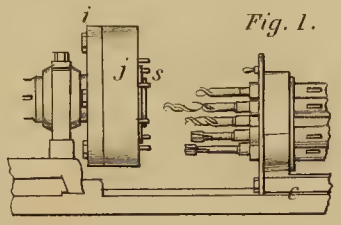

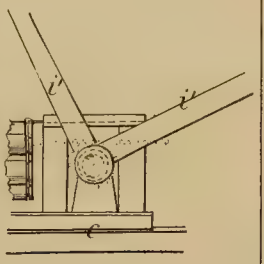

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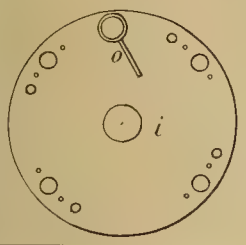

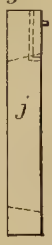

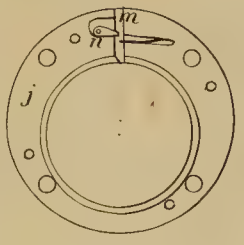

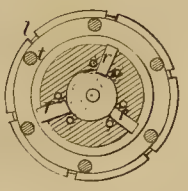

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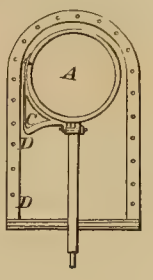

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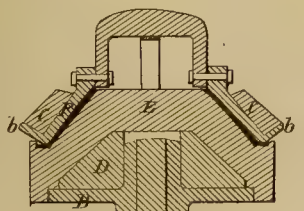

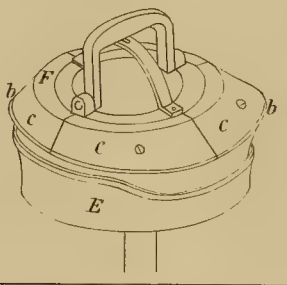

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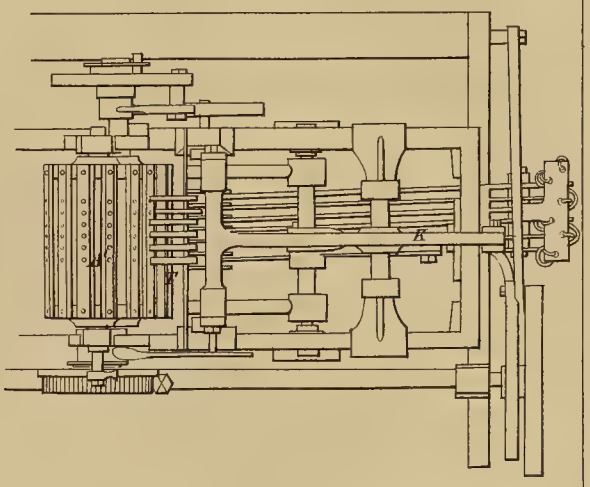

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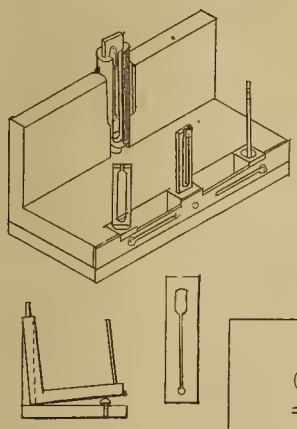

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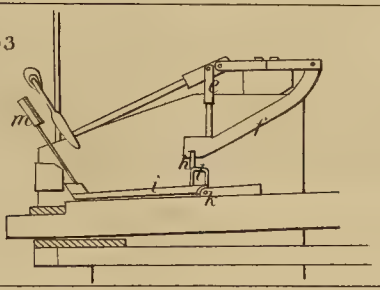

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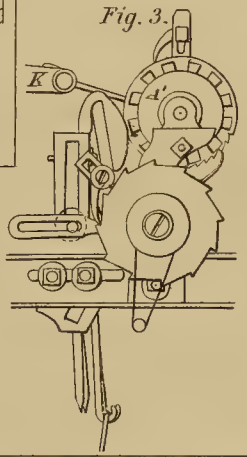

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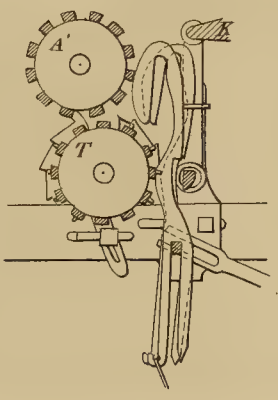

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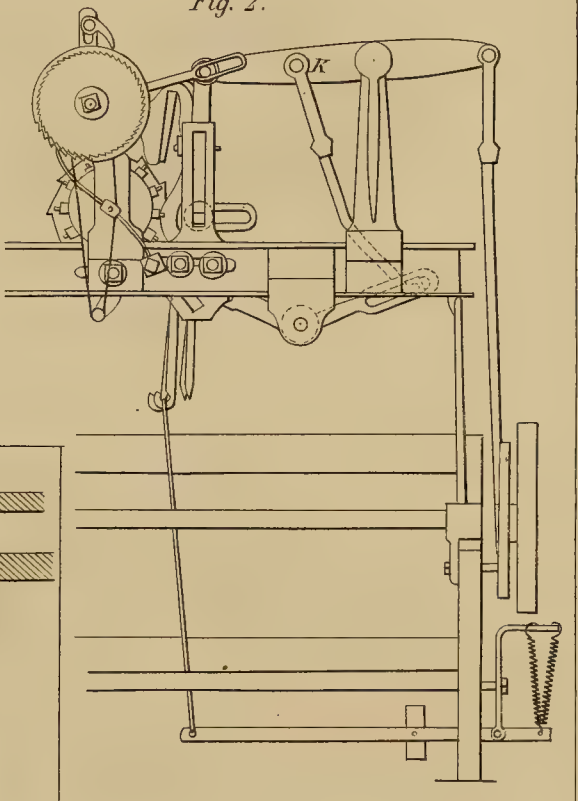

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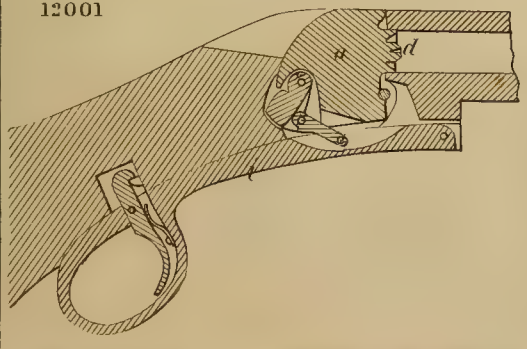

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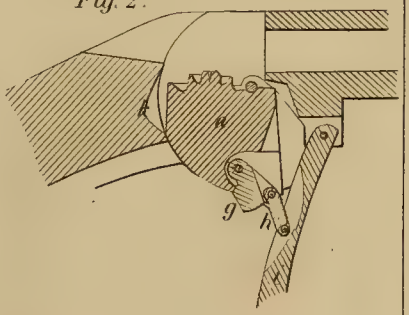

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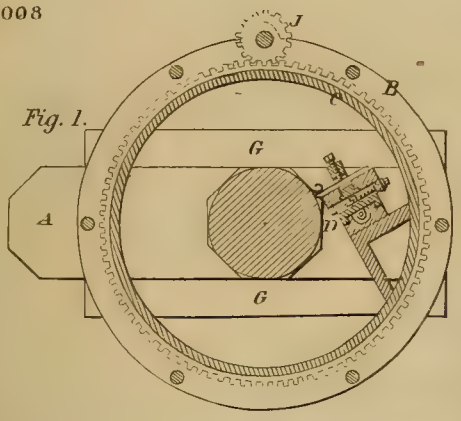

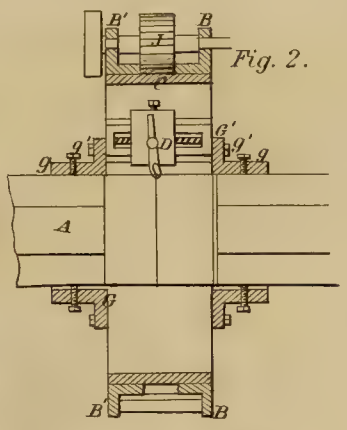

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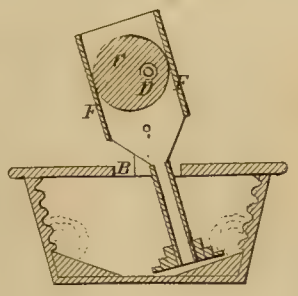

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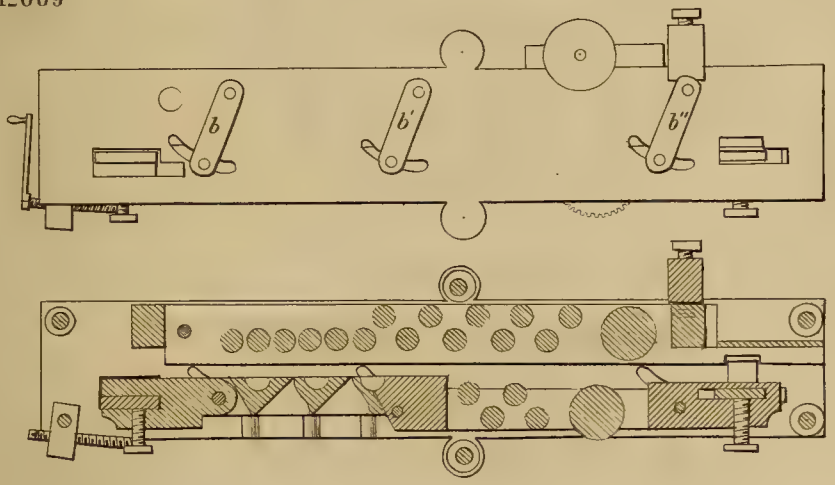

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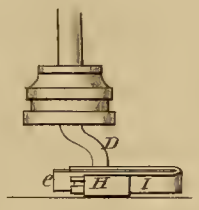

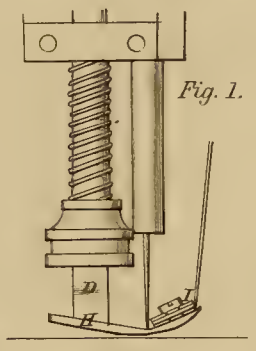

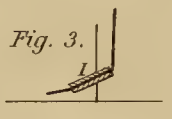

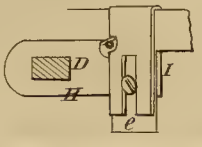

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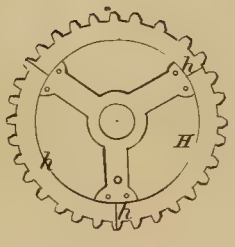

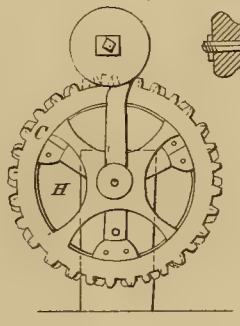

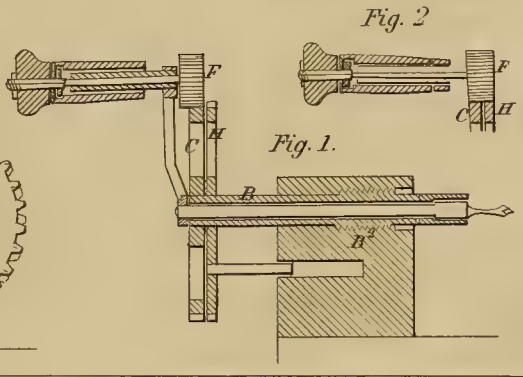

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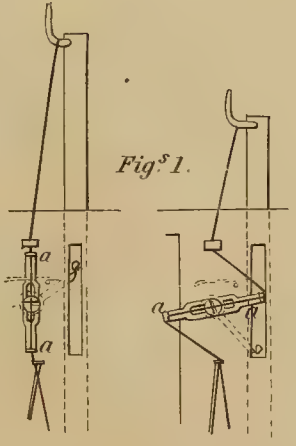

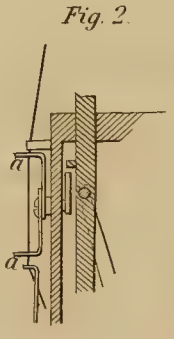

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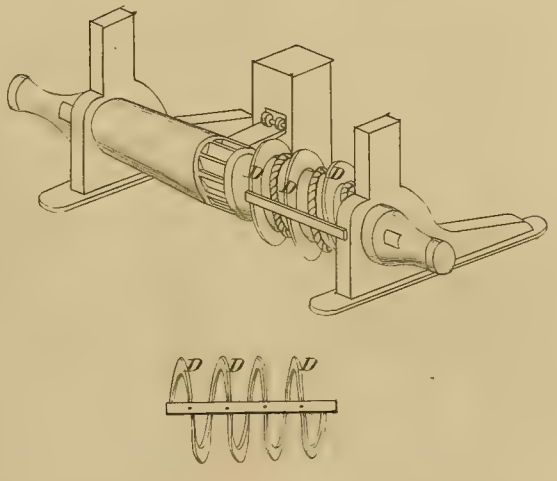

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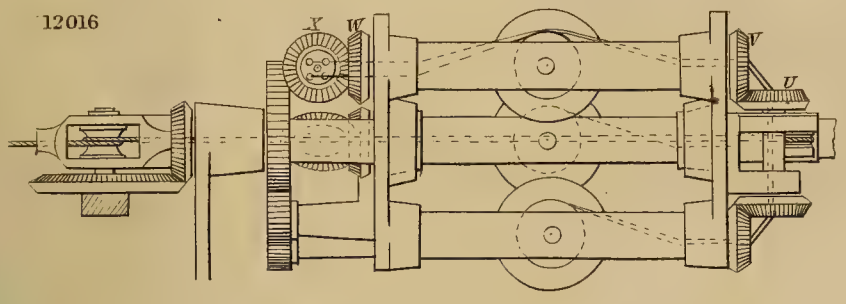

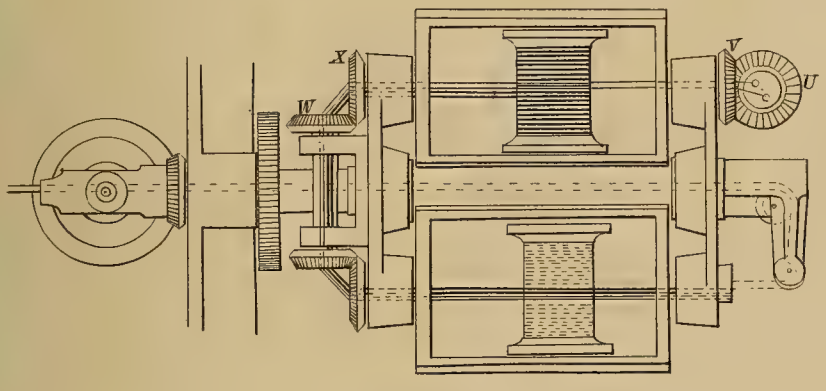

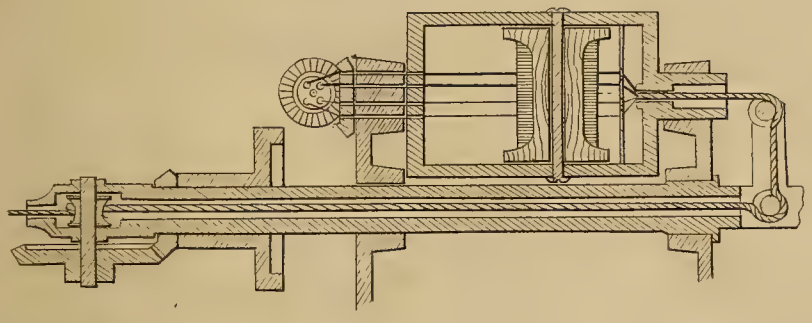

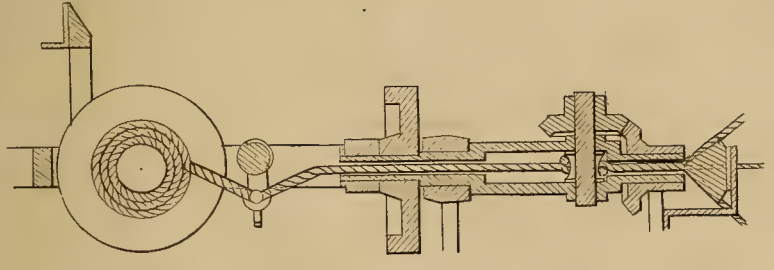

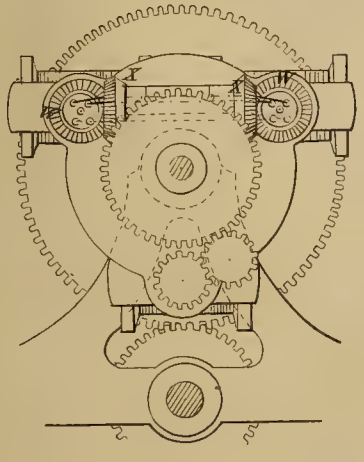

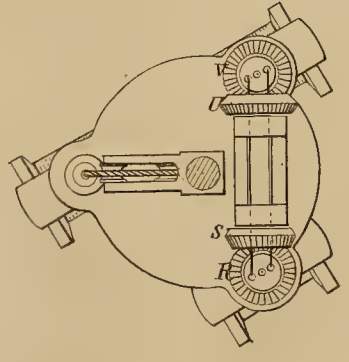

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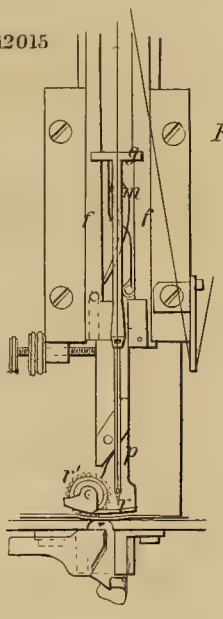

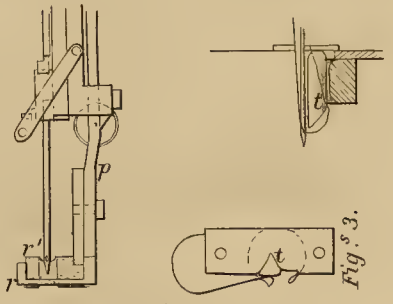

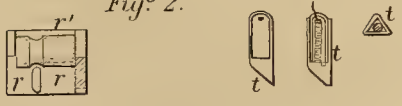

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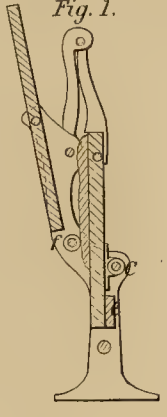

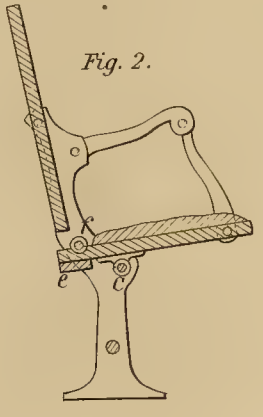

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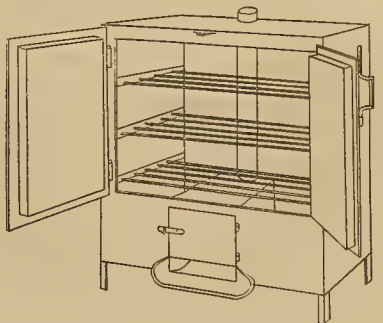

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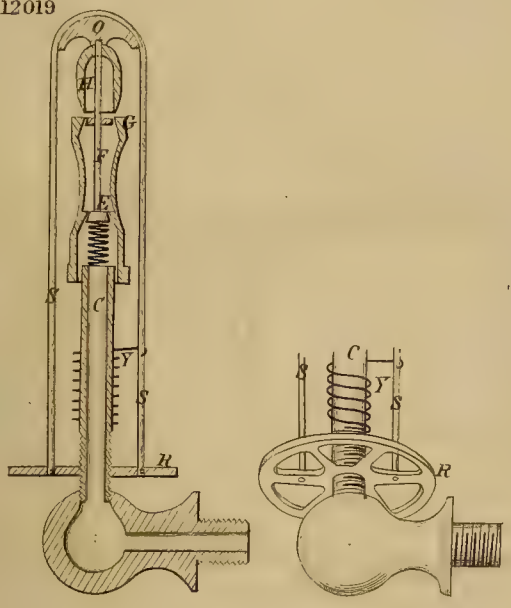

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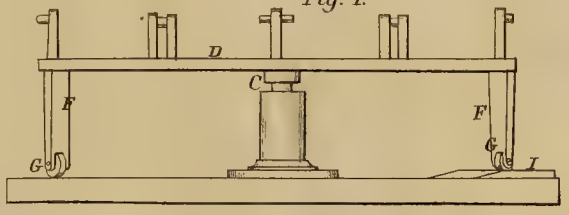

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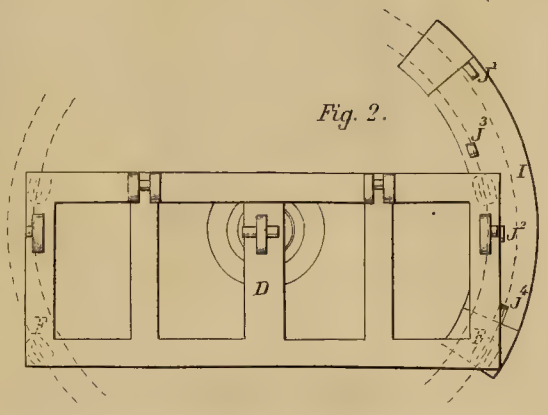

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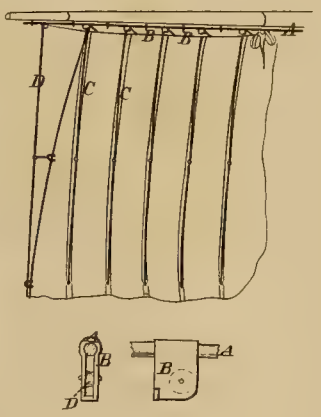

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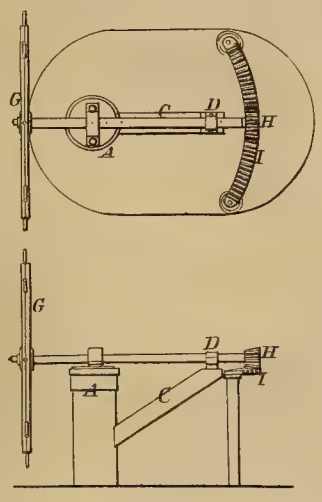

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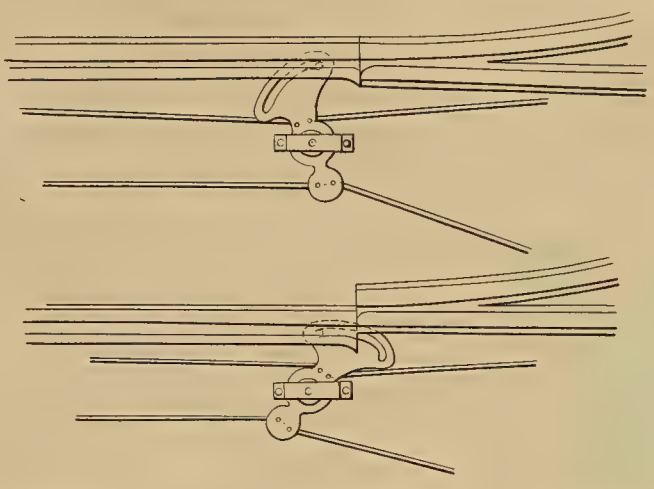

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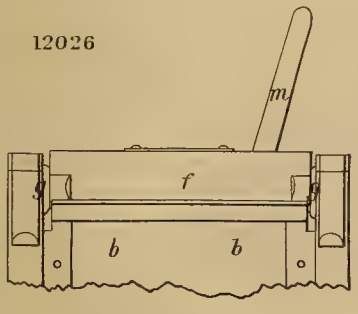

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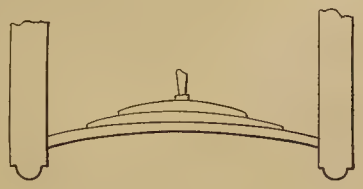

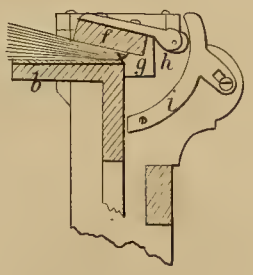

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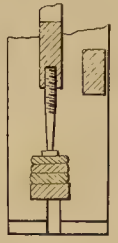

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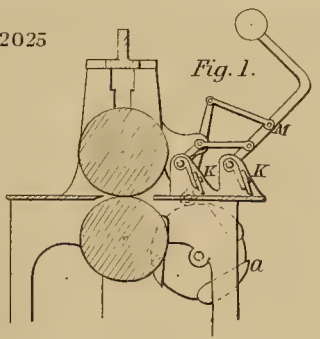

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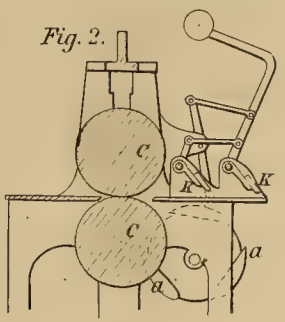

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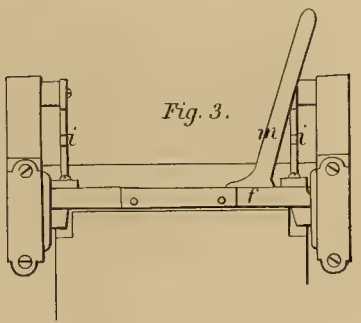

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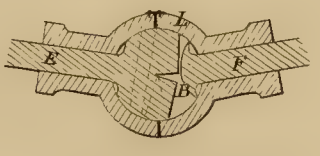

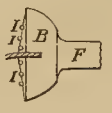

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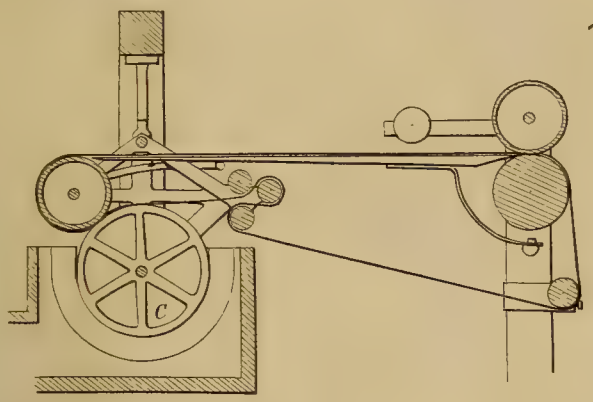

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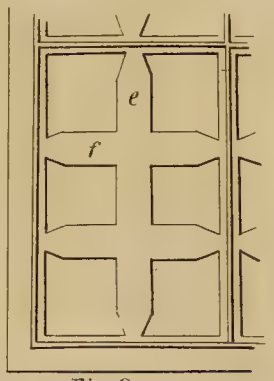

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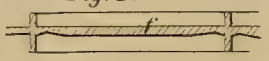

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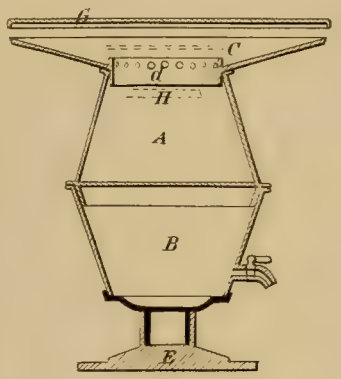

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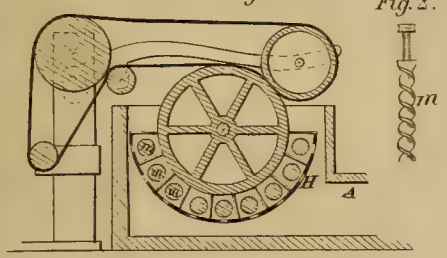

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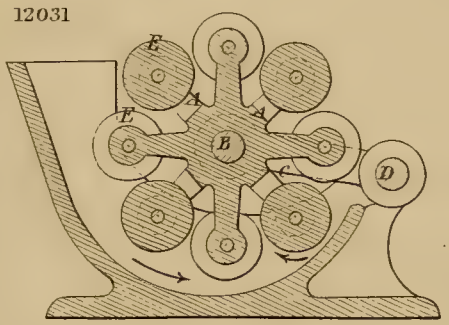

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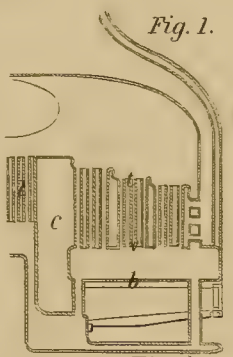

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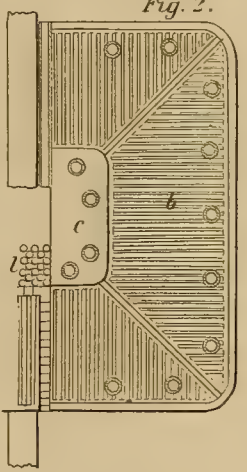

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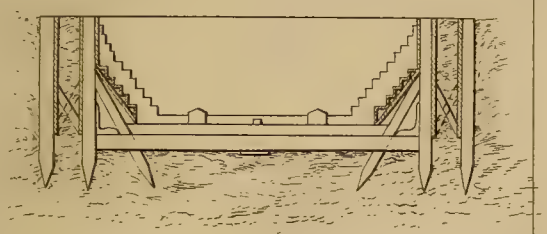

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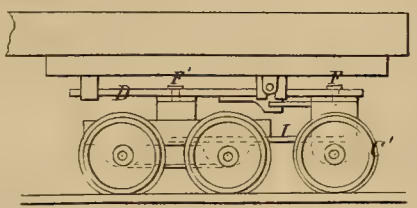

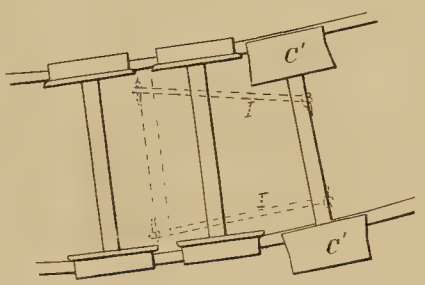

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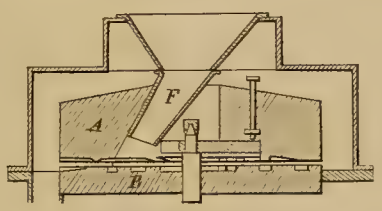

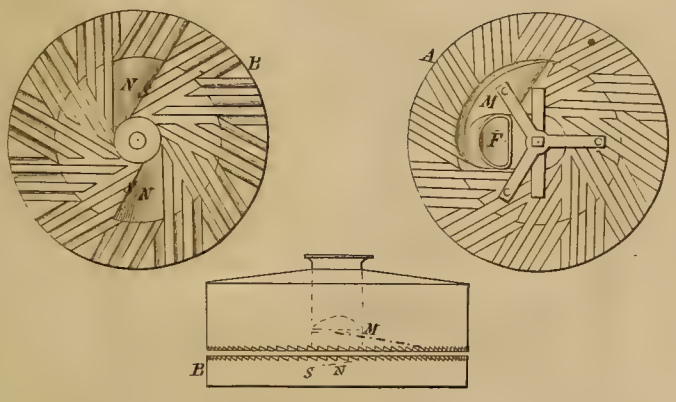

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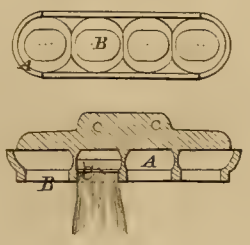

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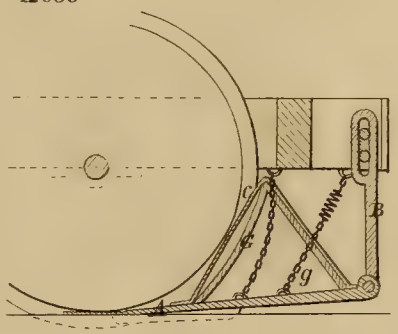

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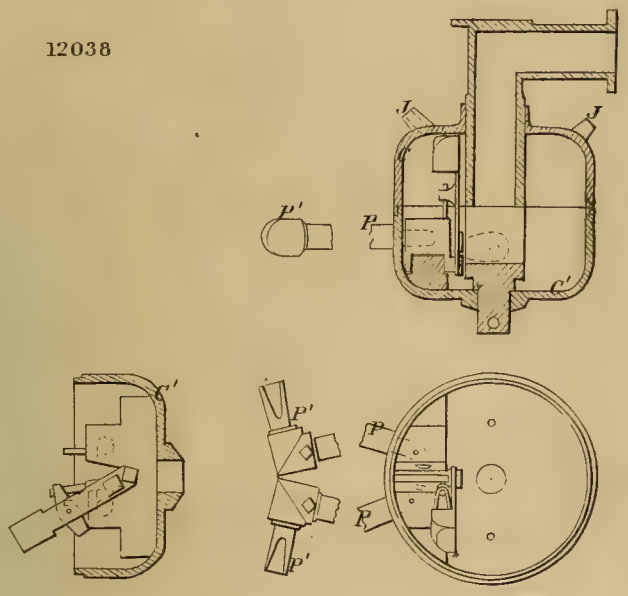

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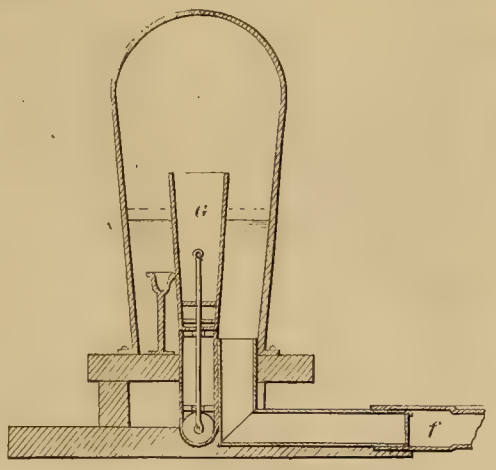

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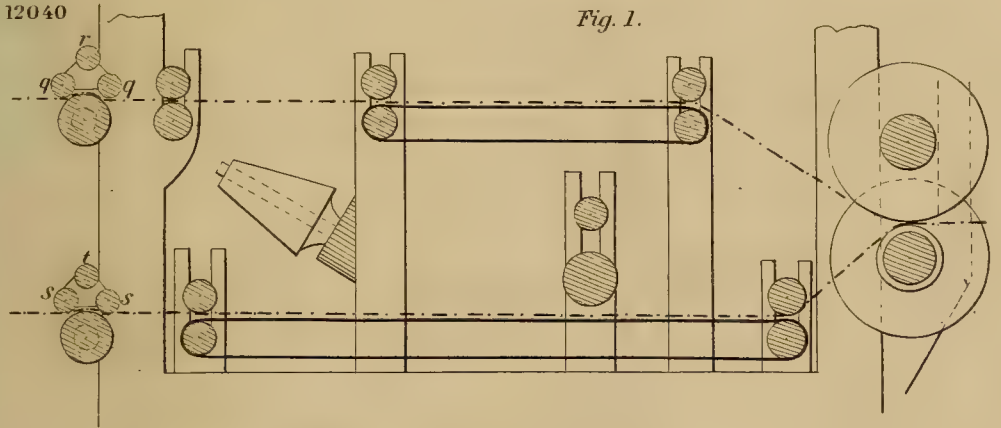

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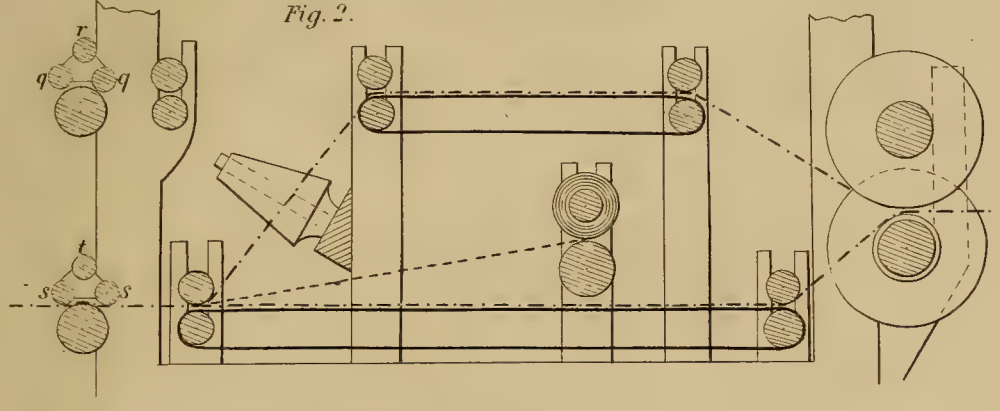

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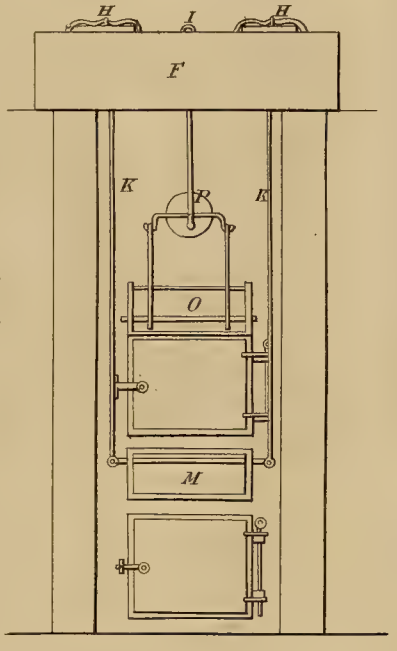

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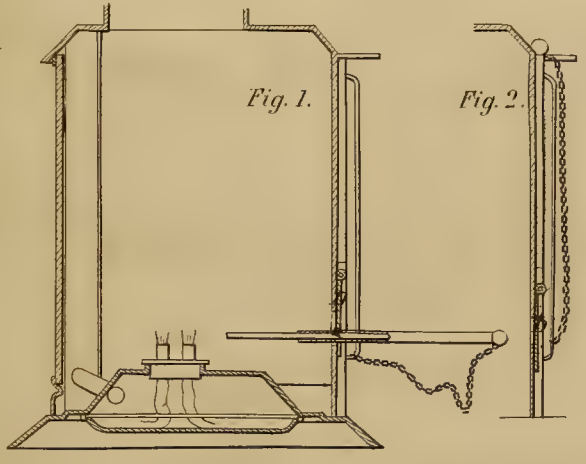

Fig. 2.

Fig. 3.

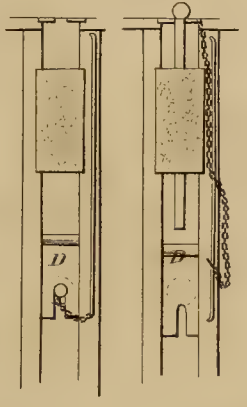

Fig. 4.

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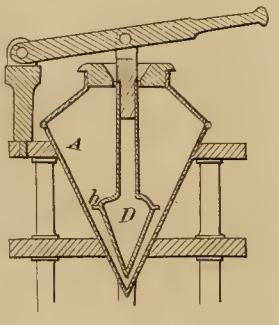

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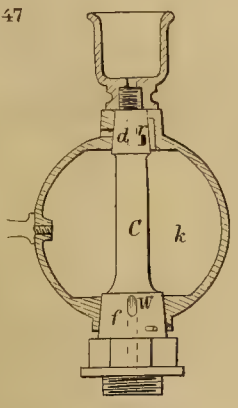

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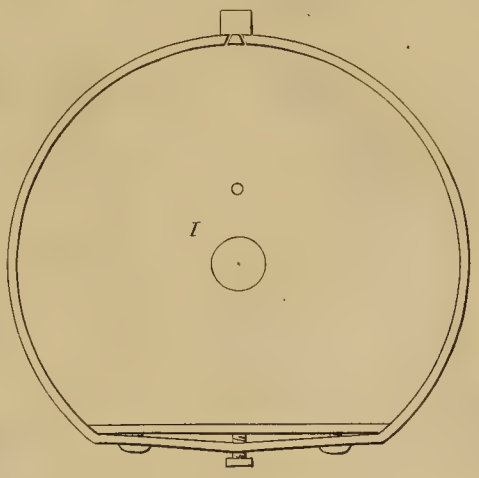

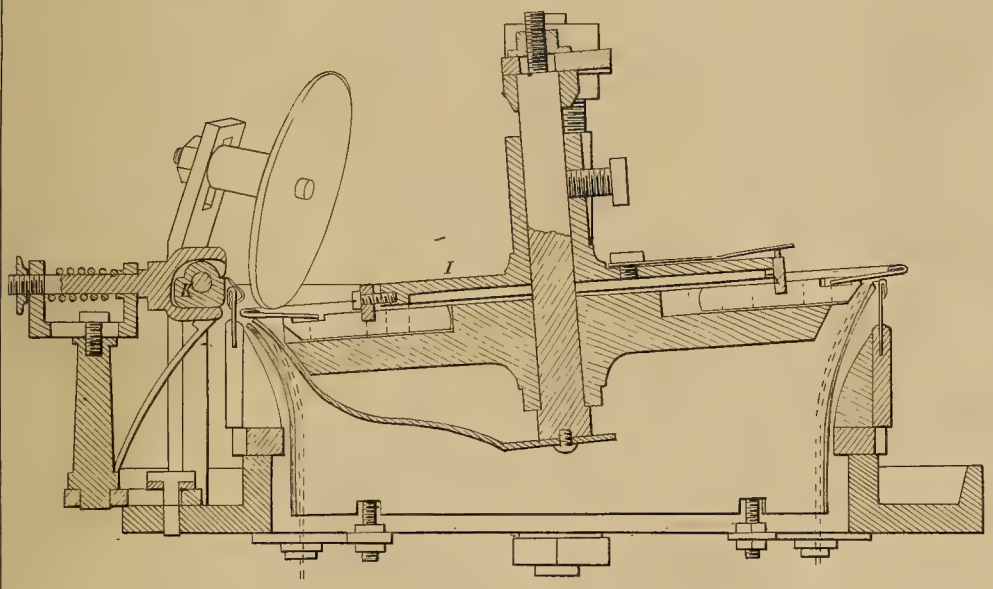

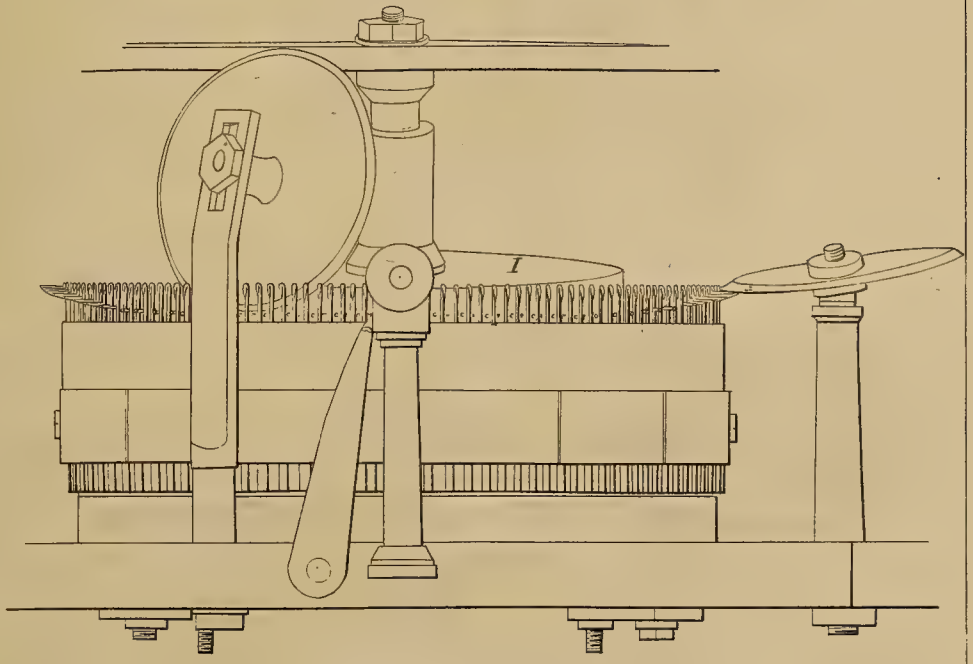

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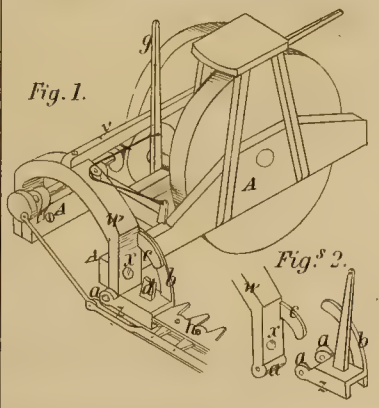

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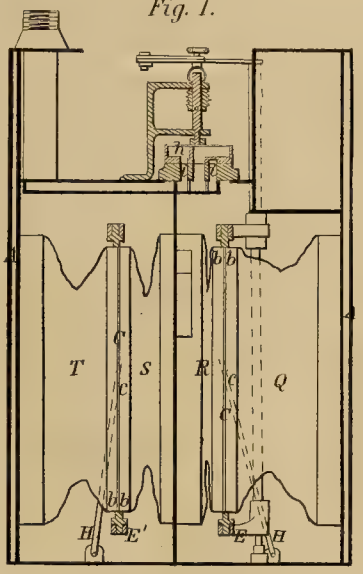

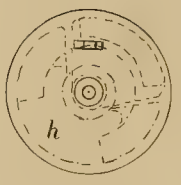

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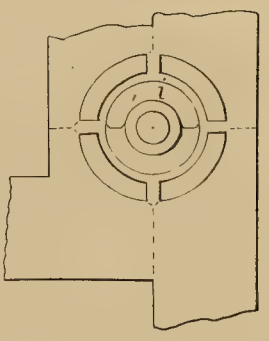

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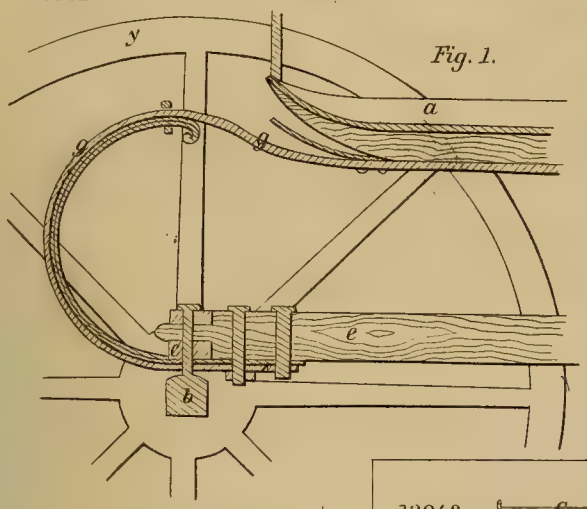

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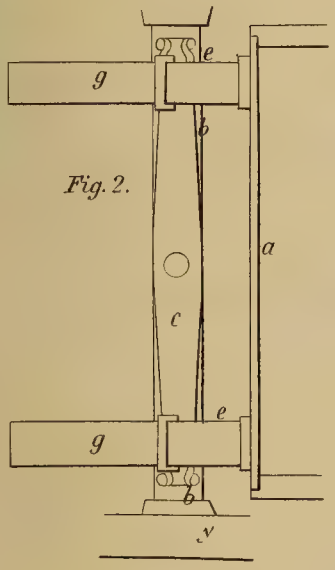

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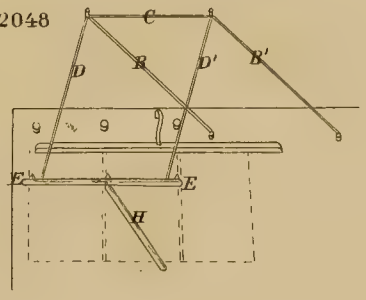

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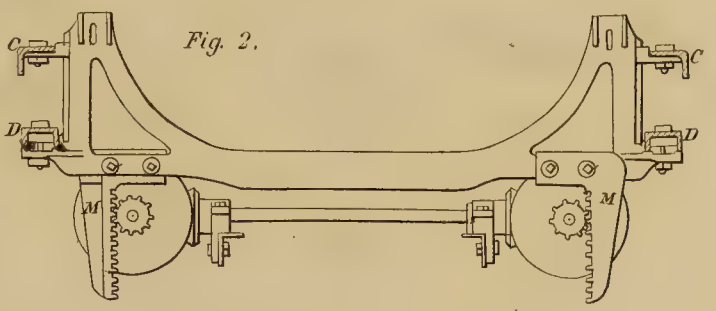

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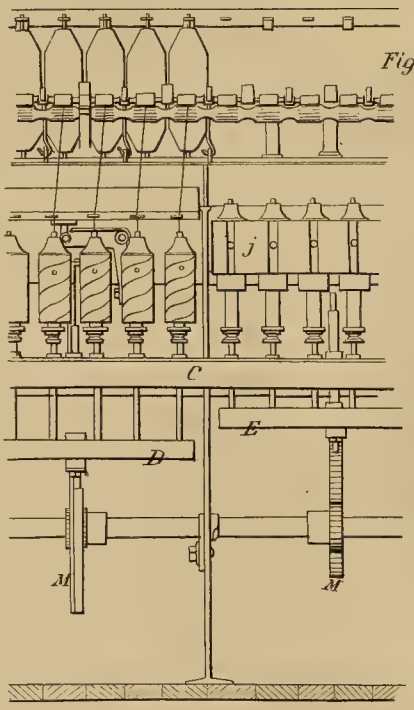

Fig. 1.

Fig. 4.

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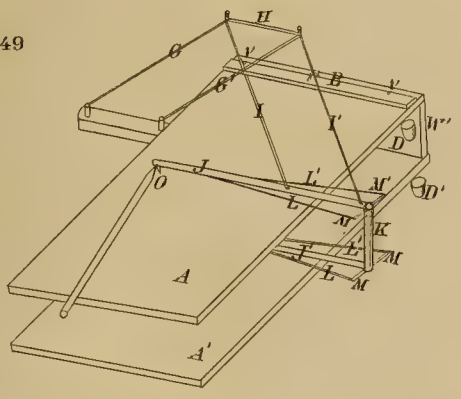

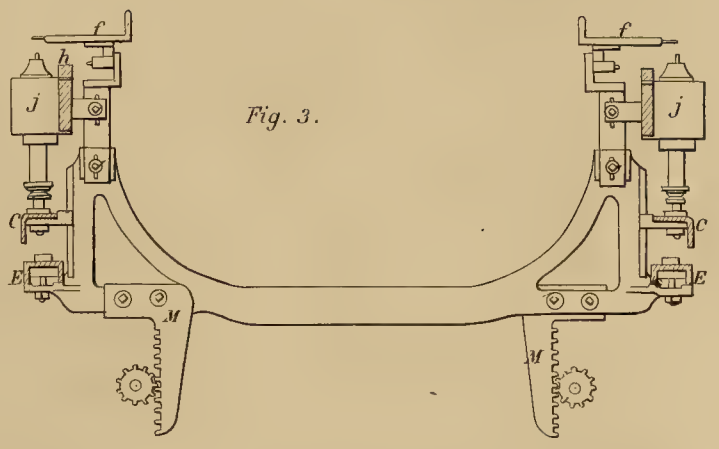

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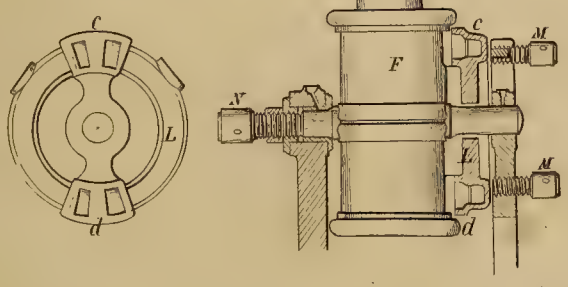

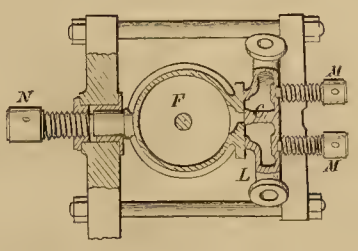

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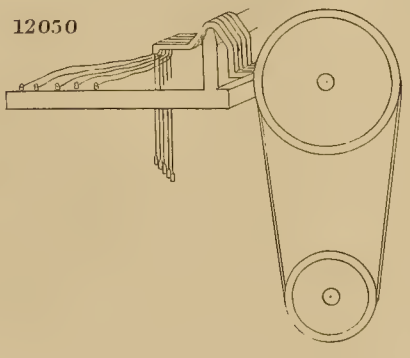

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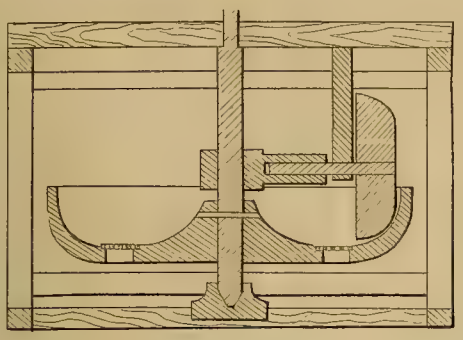

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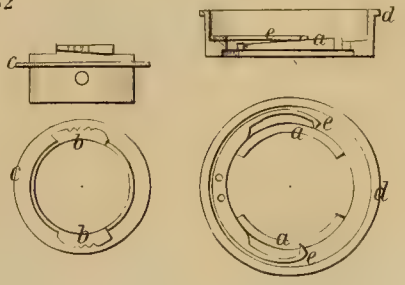

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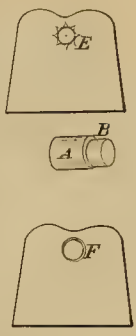

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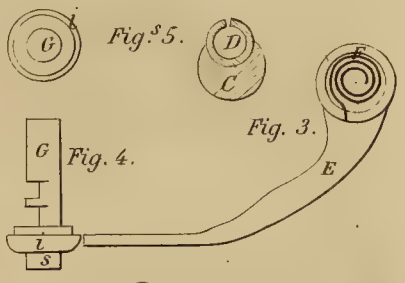

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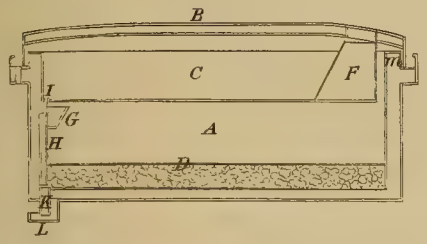

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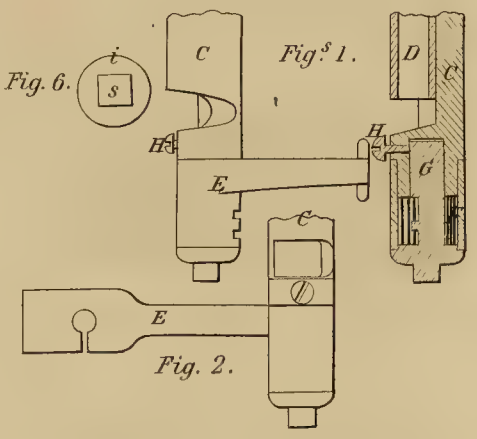

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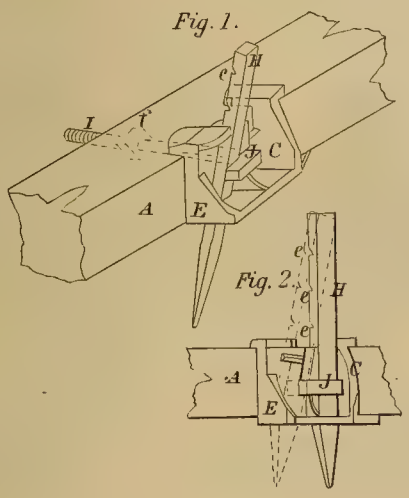

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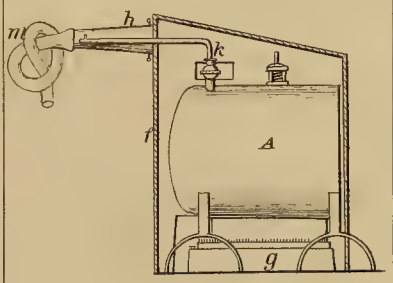

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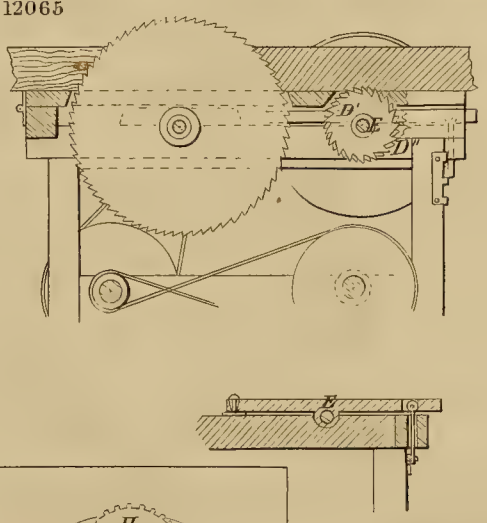

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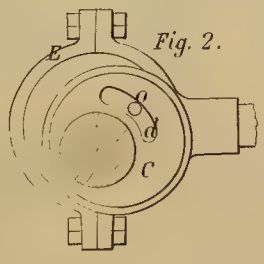

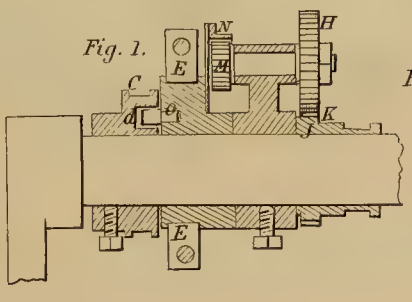

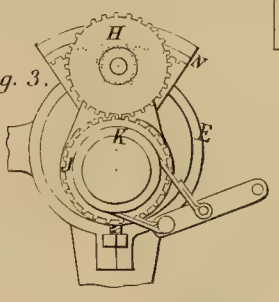

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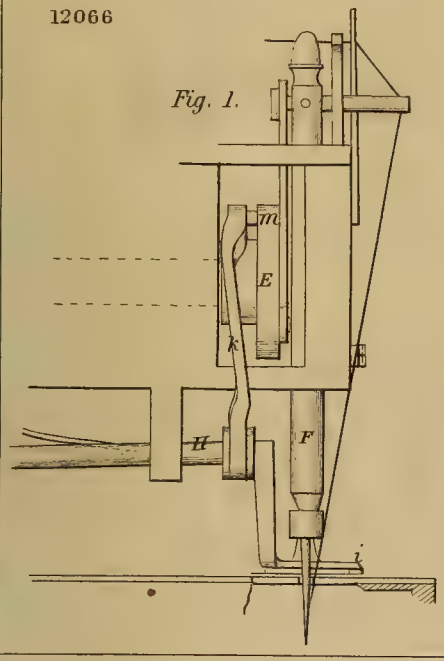

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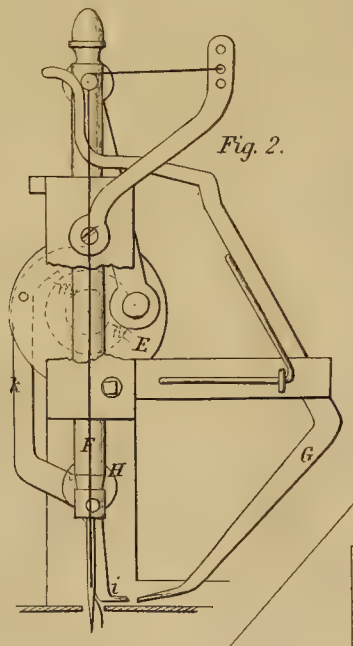

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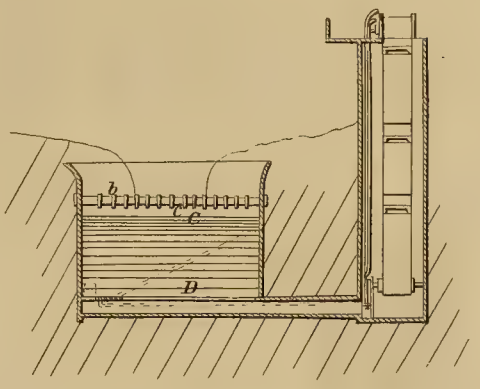

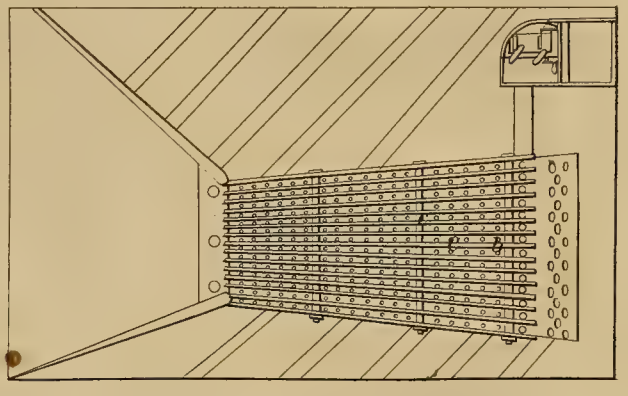

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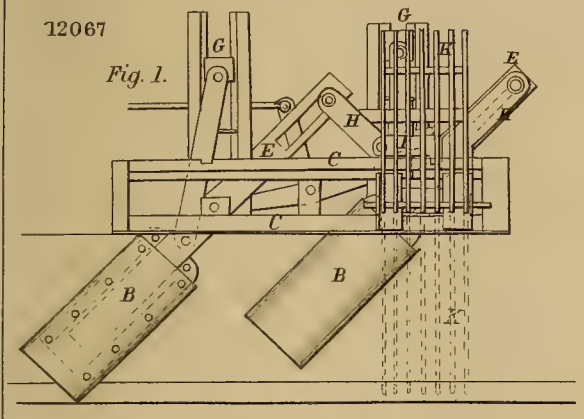

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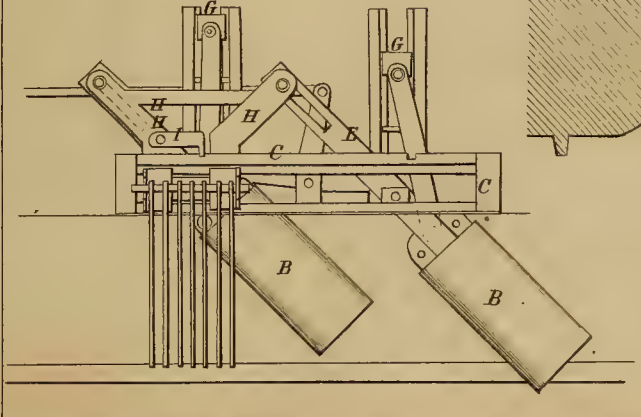

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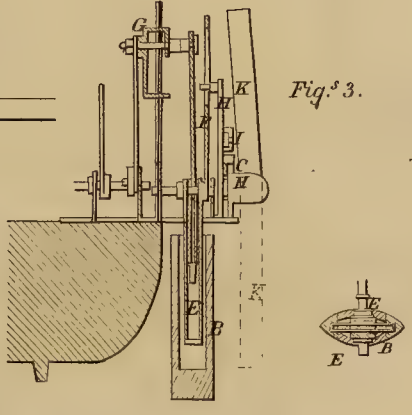

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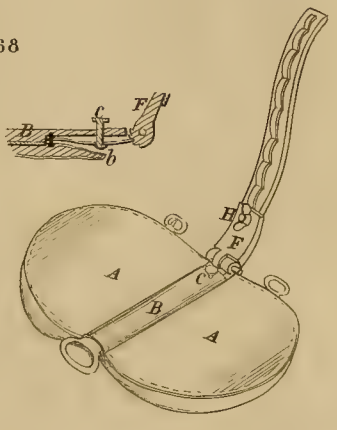

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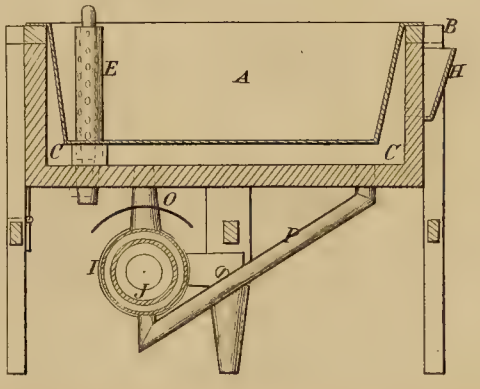

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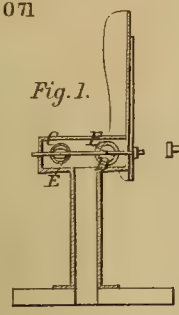

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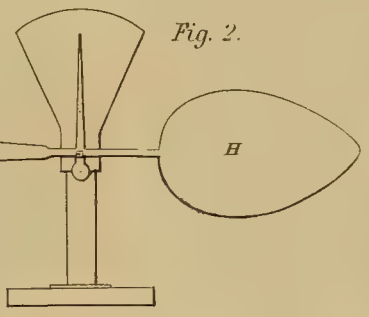

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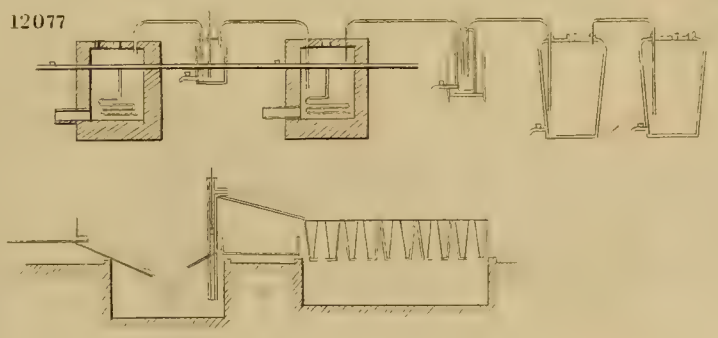

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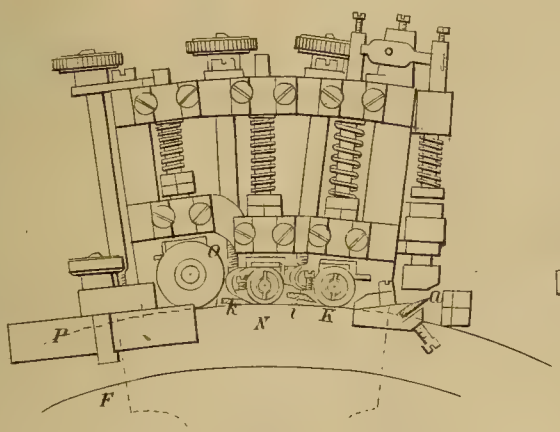

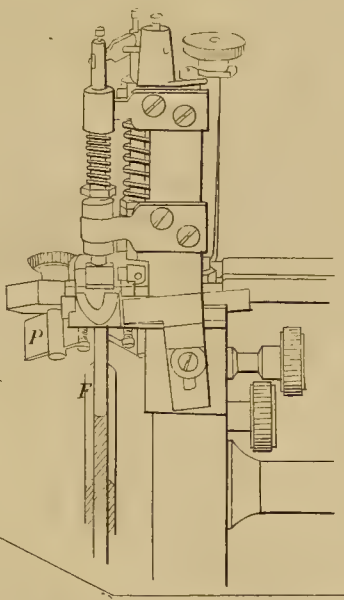

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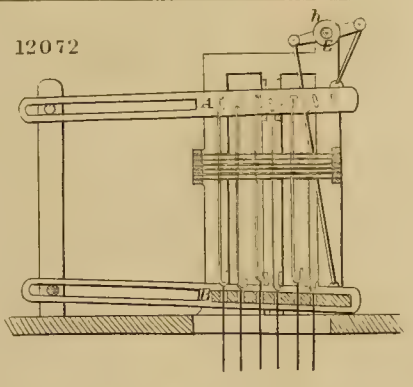

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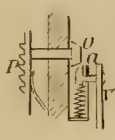

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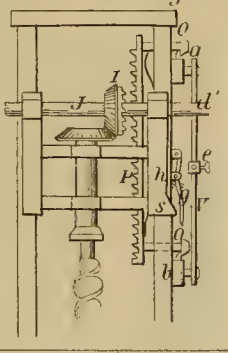

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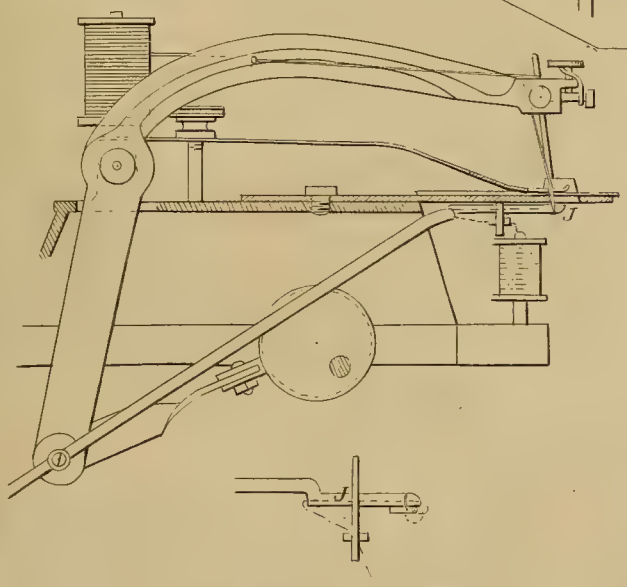

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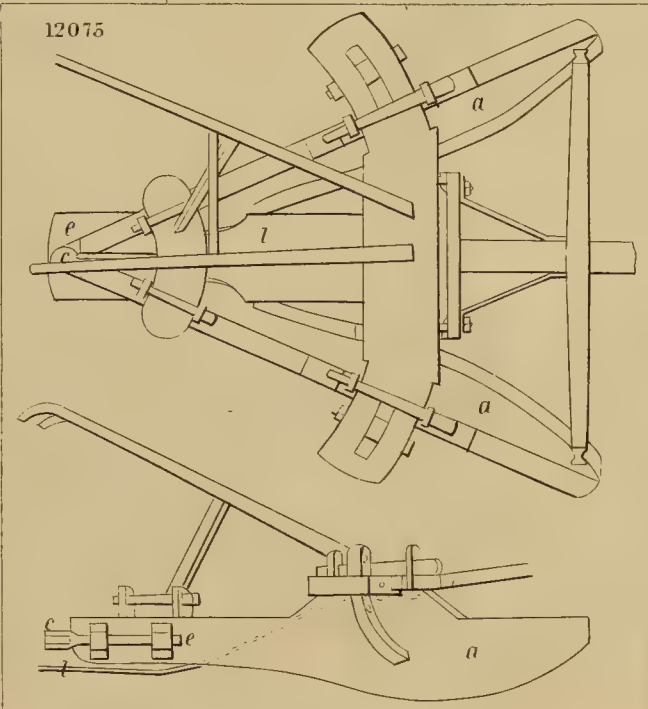

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Fig. 2.

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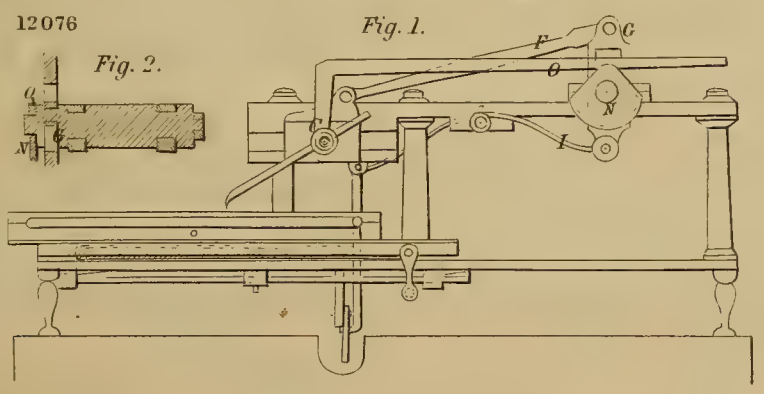

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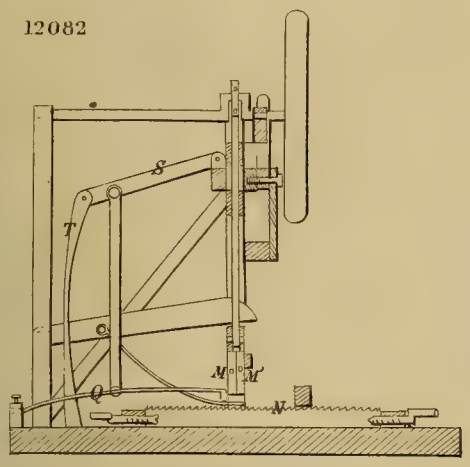
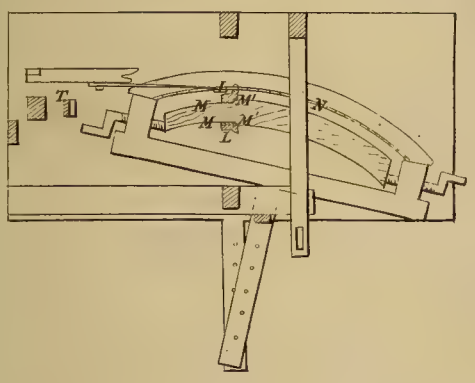
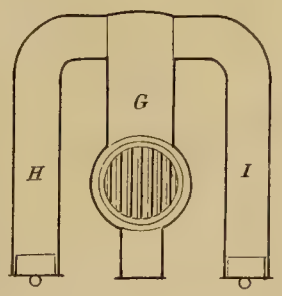




12080 *Fig. 1.*



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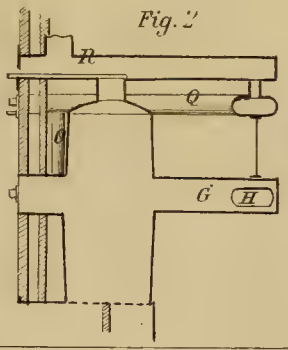

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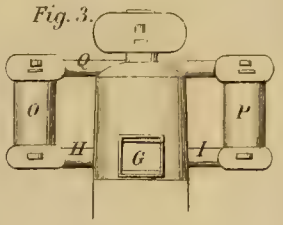

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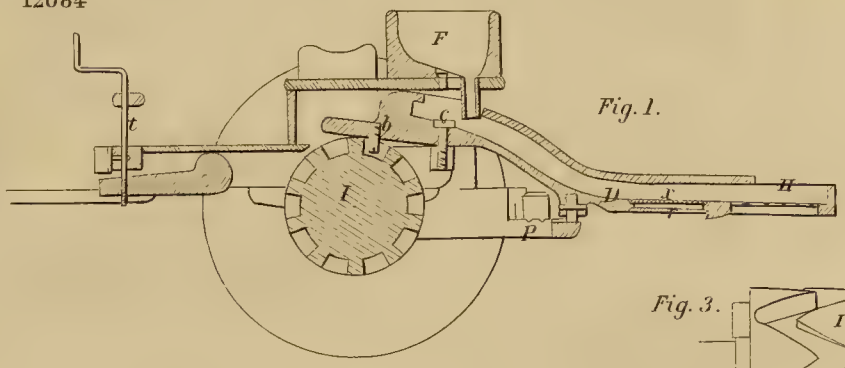
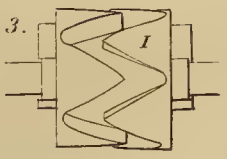


Fig. 1.

Fig. 3.



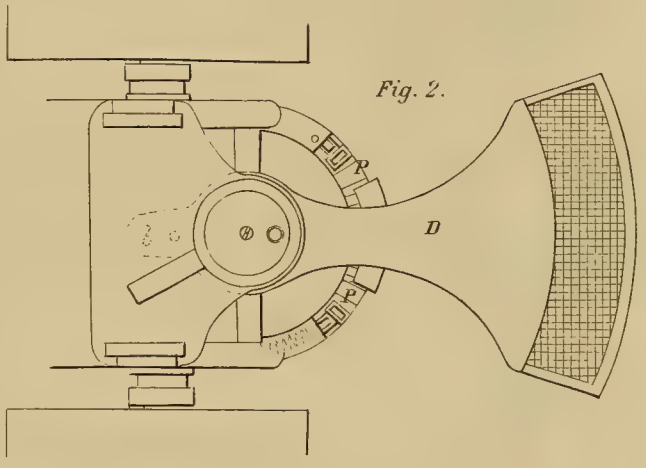


Fig. 2.

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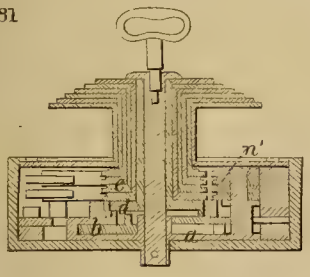

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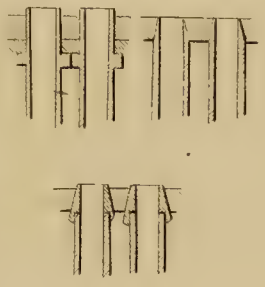

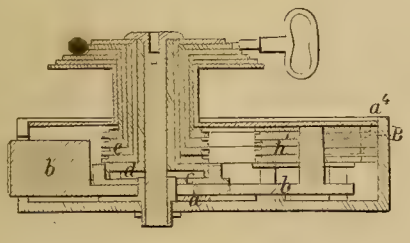

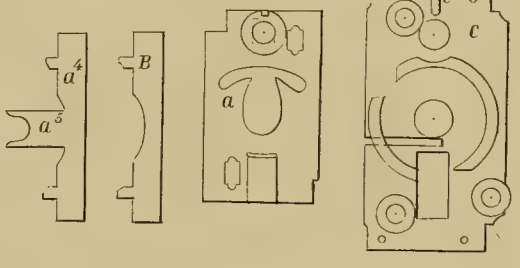

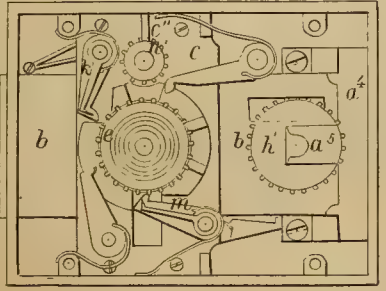

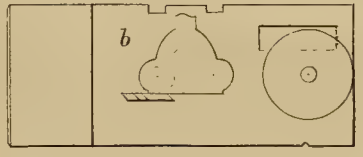

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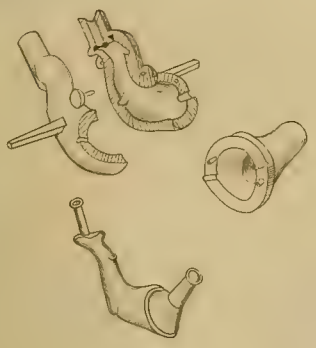

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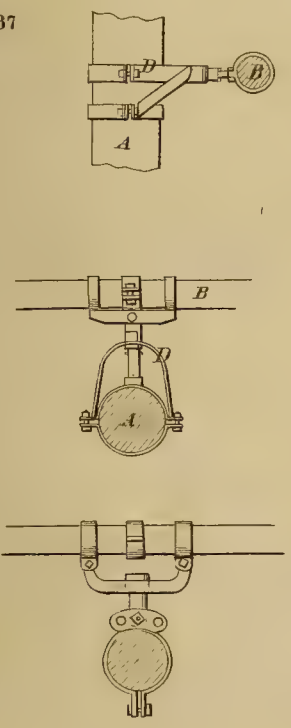

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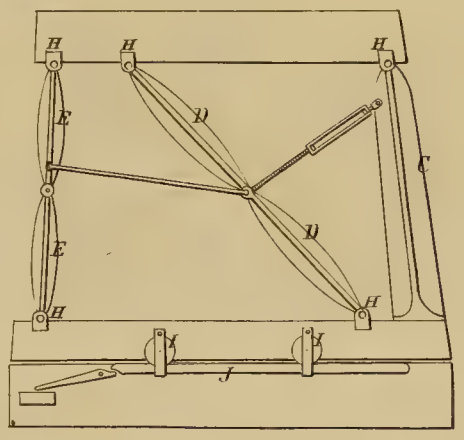

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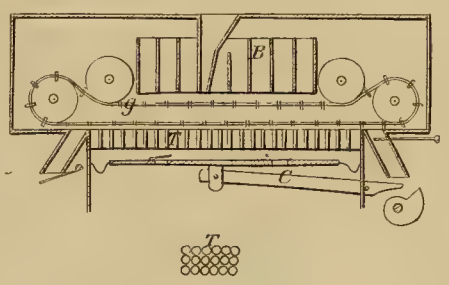

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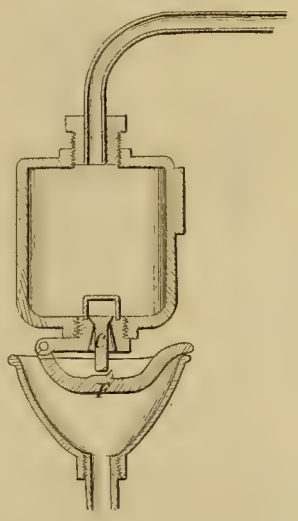

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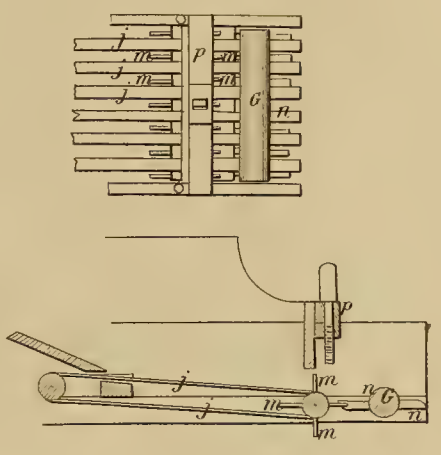

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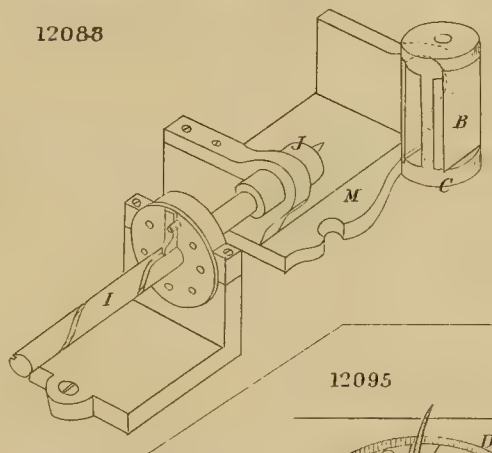

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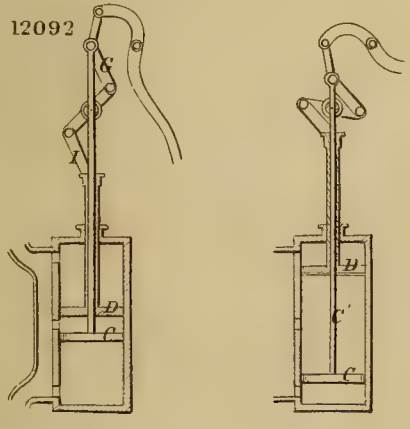

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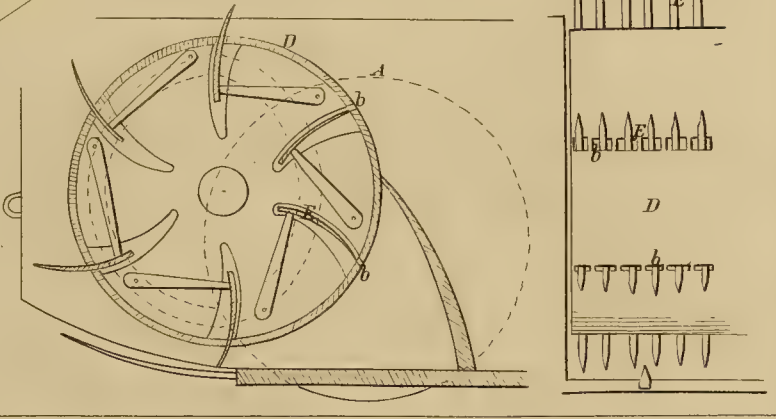

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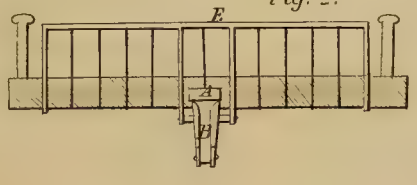
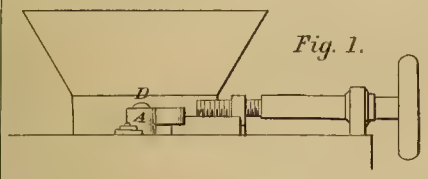


Fig. 2.

Fig. 1.

12096

Fig. 1.



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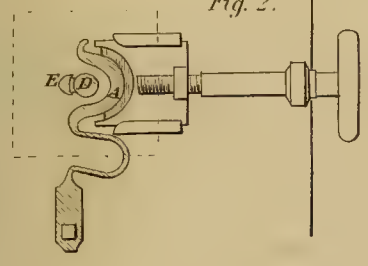

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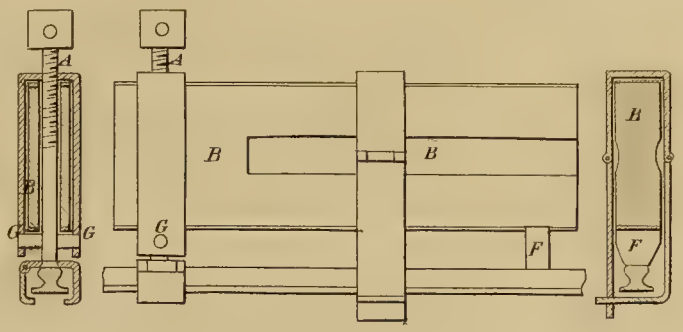

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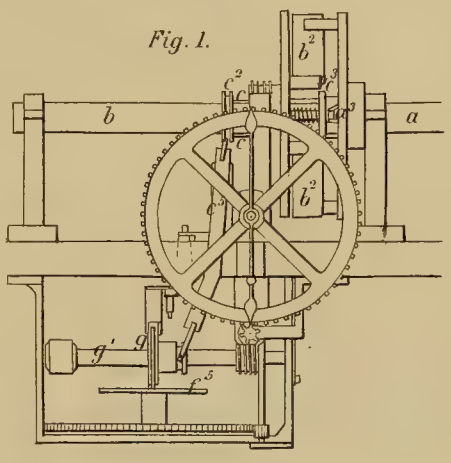

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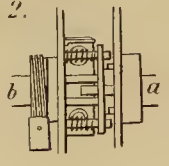

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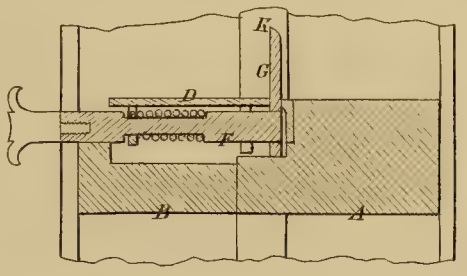

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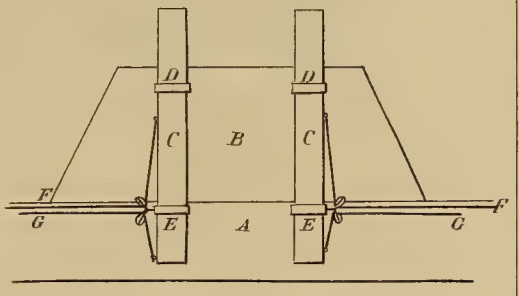

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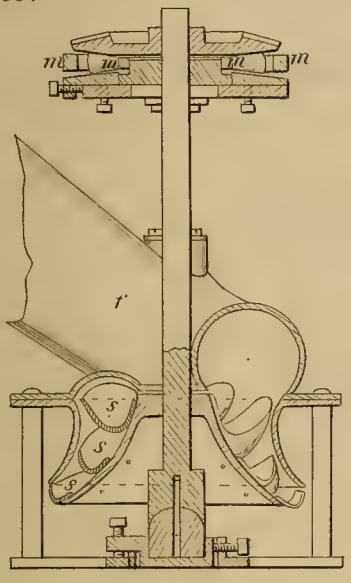

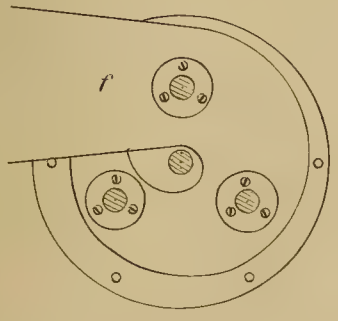

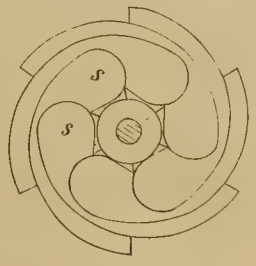

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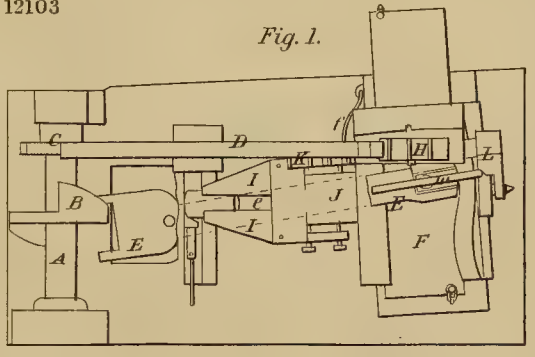

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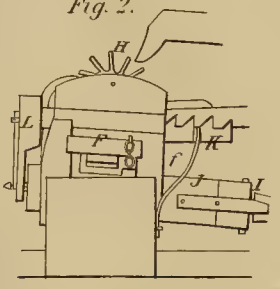

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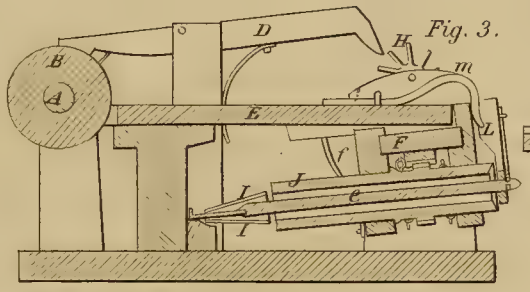

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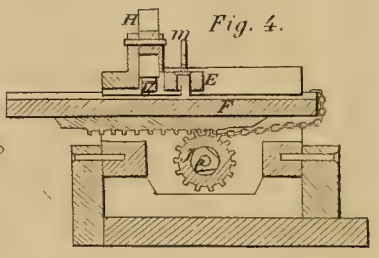

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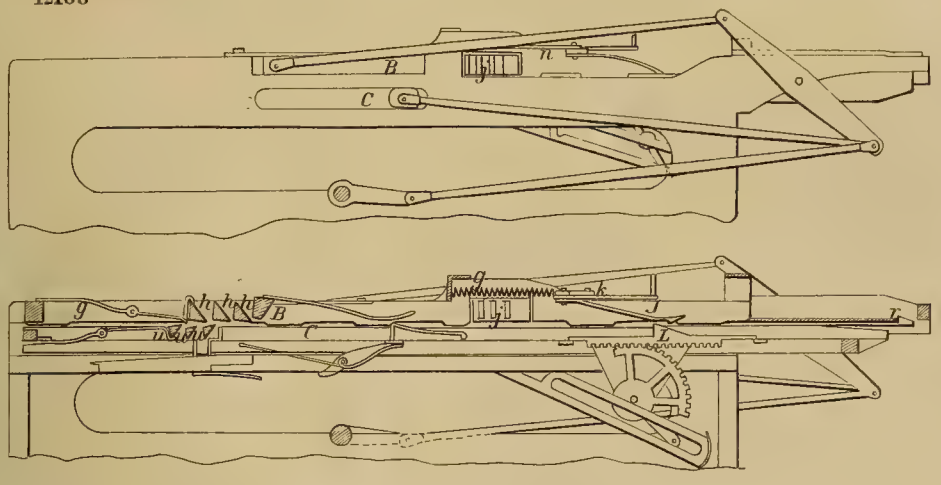

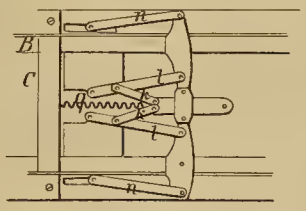

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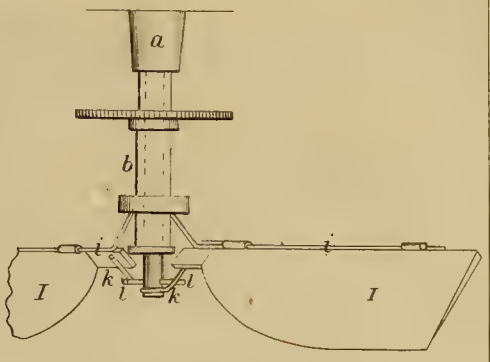

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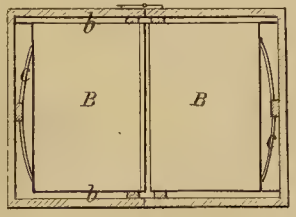

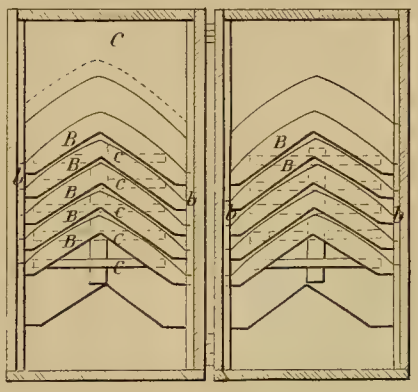

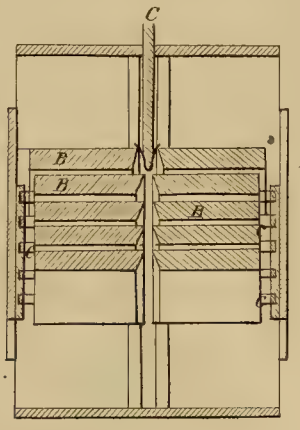

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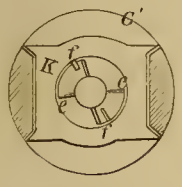

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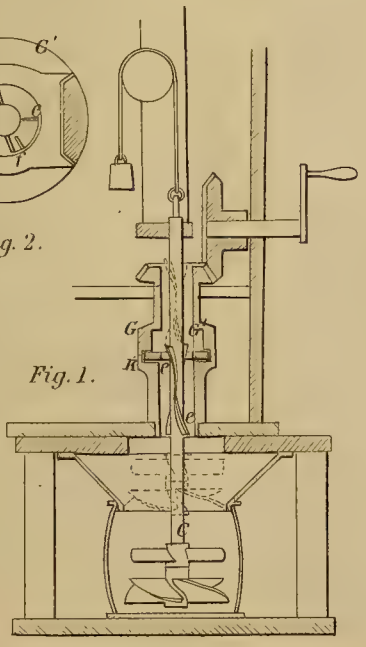

Fig. 1.

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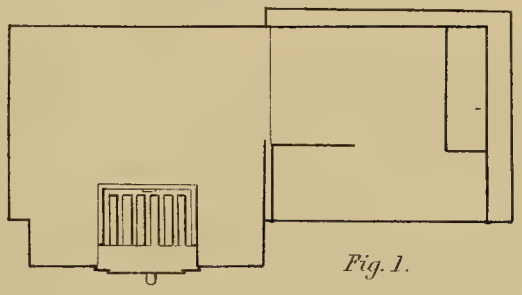

Fig. 1.

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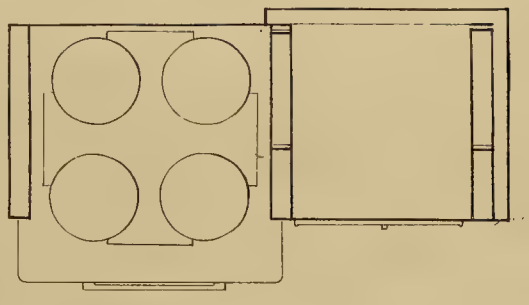

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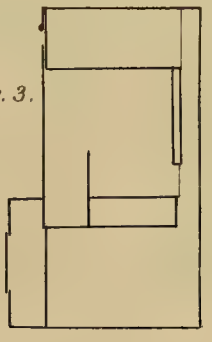

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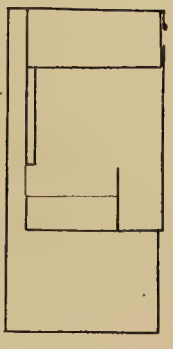

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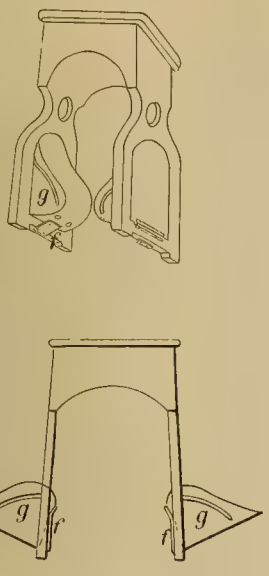

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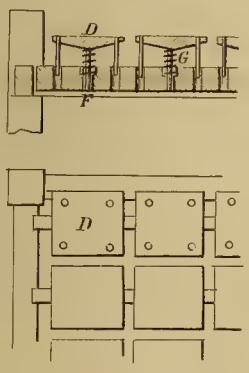

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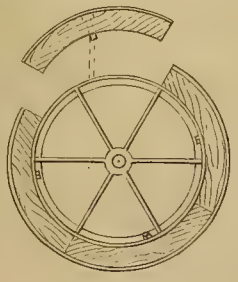

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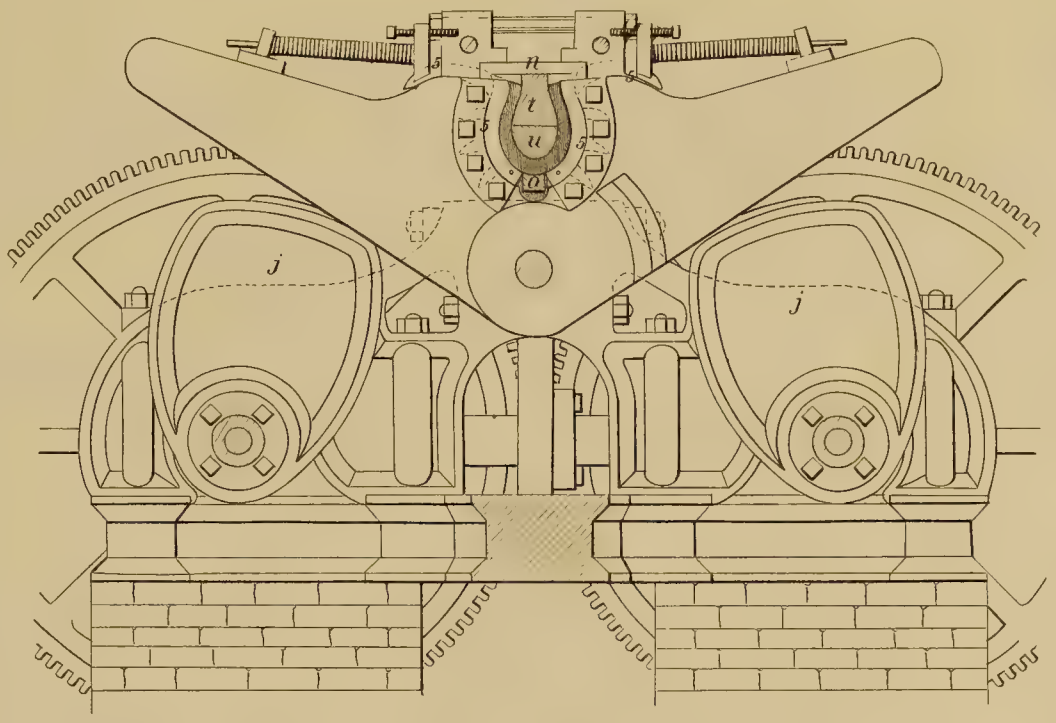

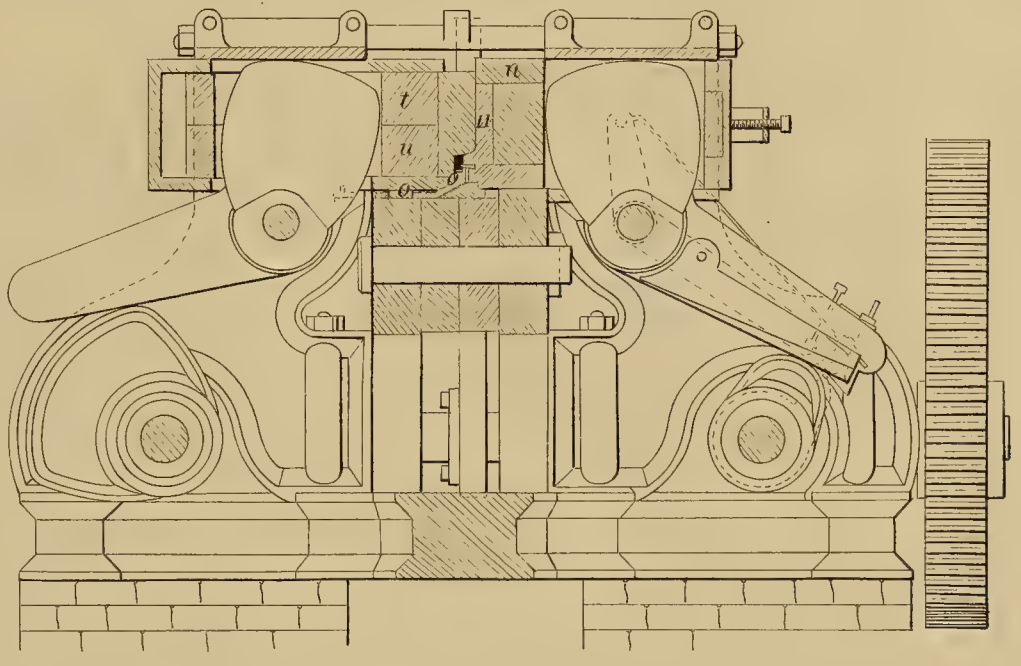

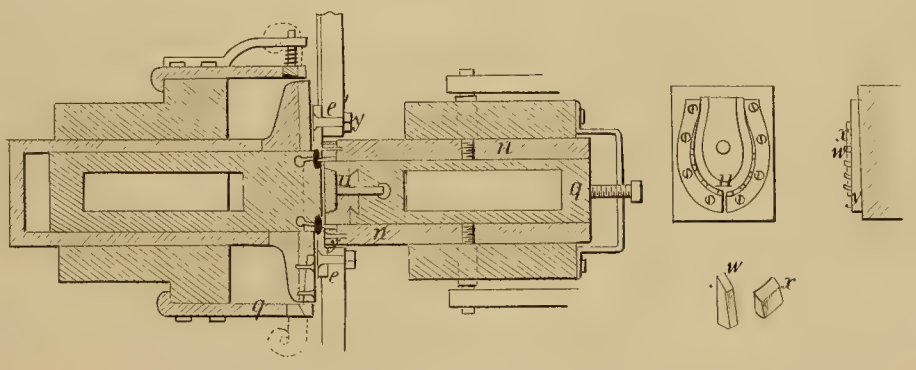

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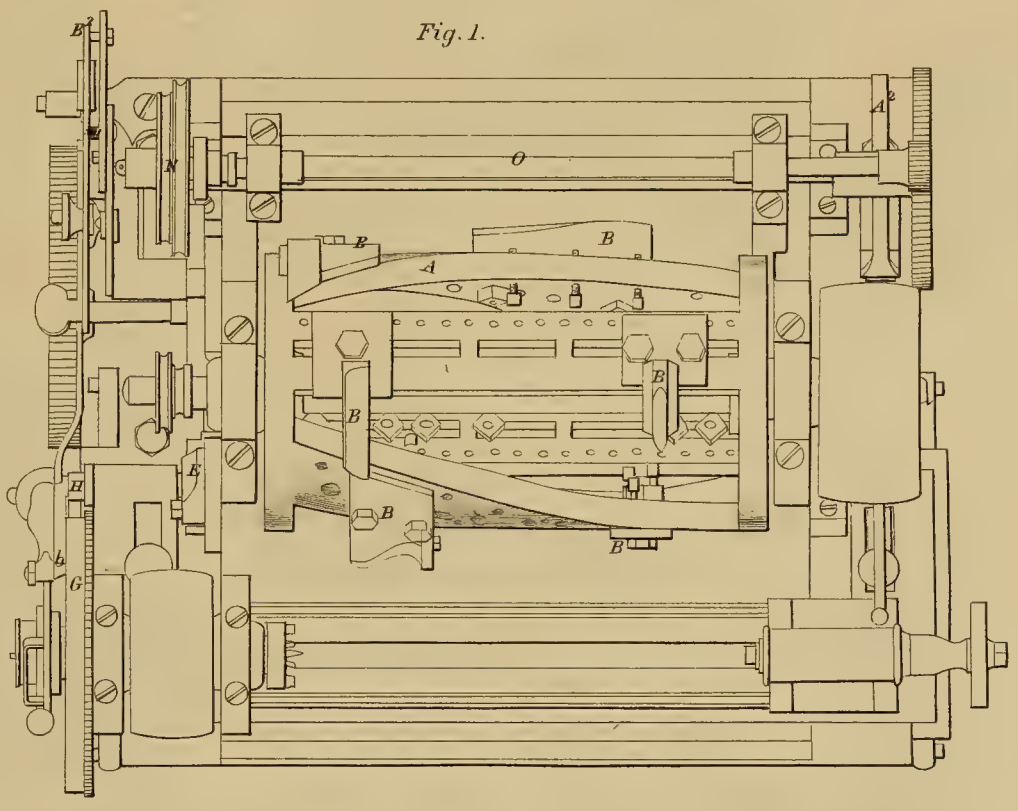

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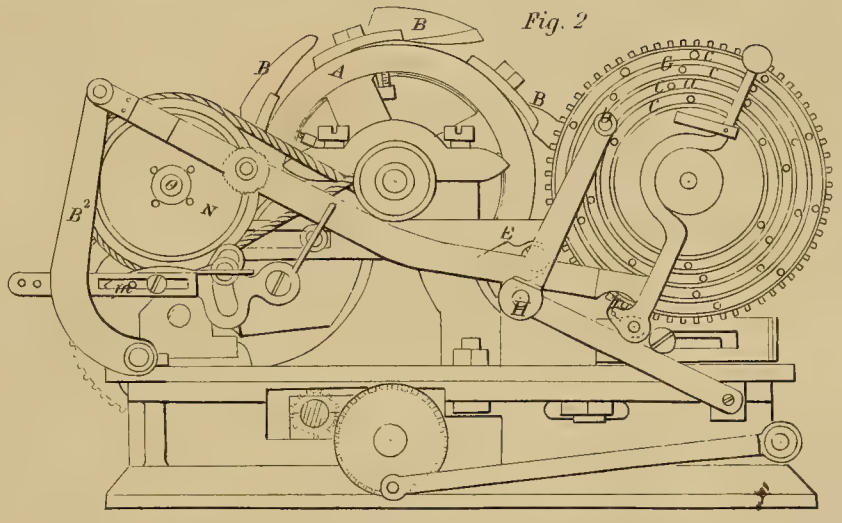

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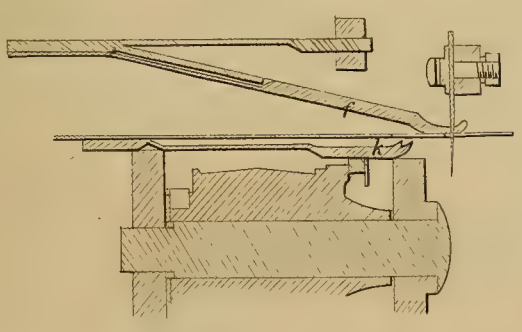

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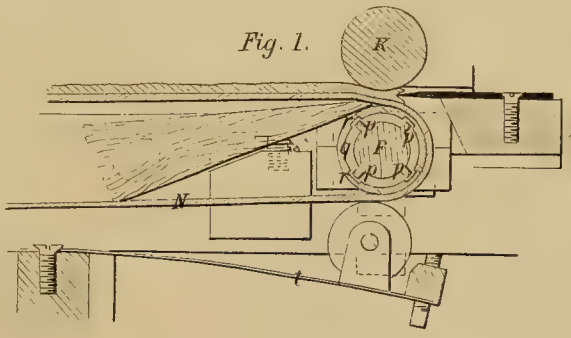

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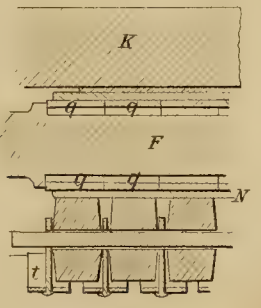

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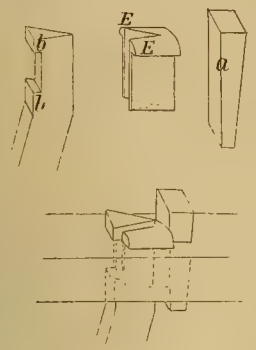

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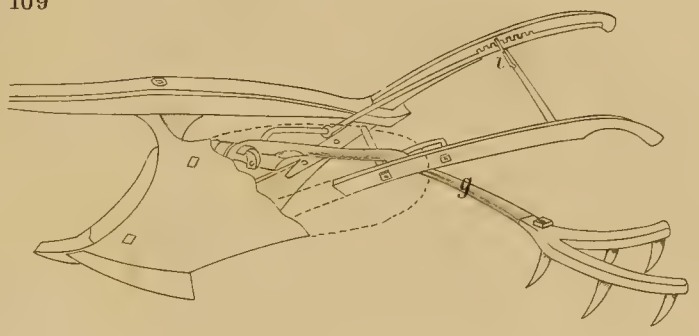

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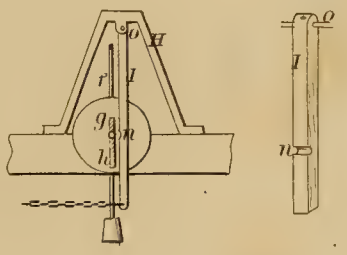

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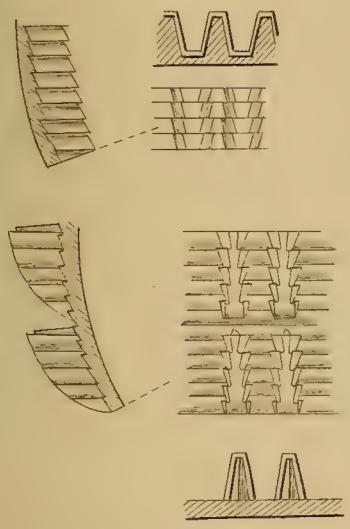

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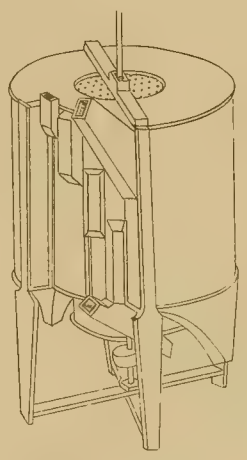

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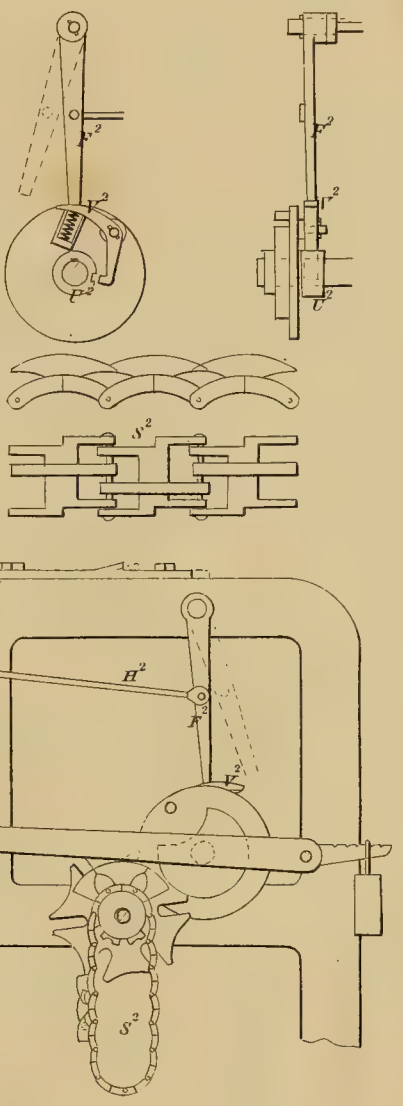

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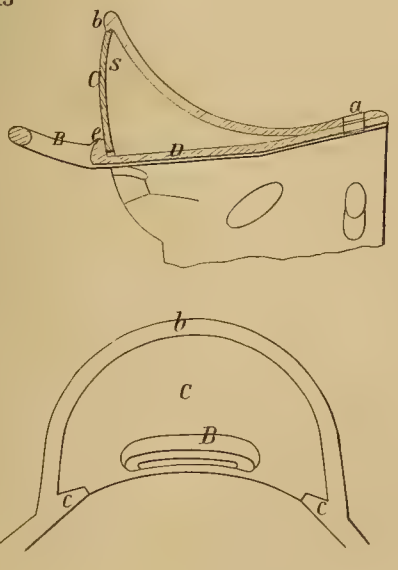

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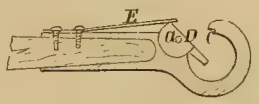

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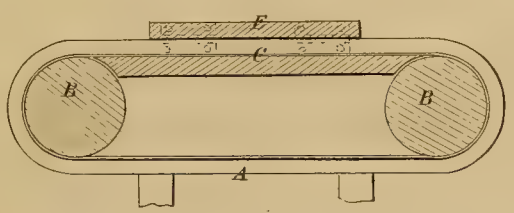

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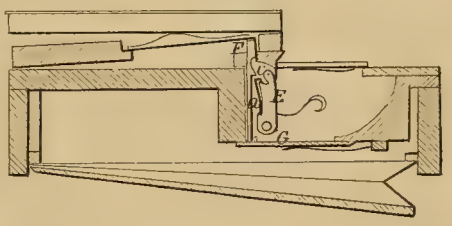

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